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CULTIVATOR,

A MONTHLY JOURNAL DEVOTED TO

AGRICULTURE, HORTICULTURE, FLORICULTURE,

AND TO

DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH ENGRAVINGS OF

FARM HOUSES AND FARM BUILDINGS, IMPROVED BREEDS OF
CATTLE, HORSES, SHEEP, SWINE AND POULTRY,
FARM IMPLEMENTS, DOMESTIC
UTENSILS, &c.

NEW SERIES—VOL. IV.

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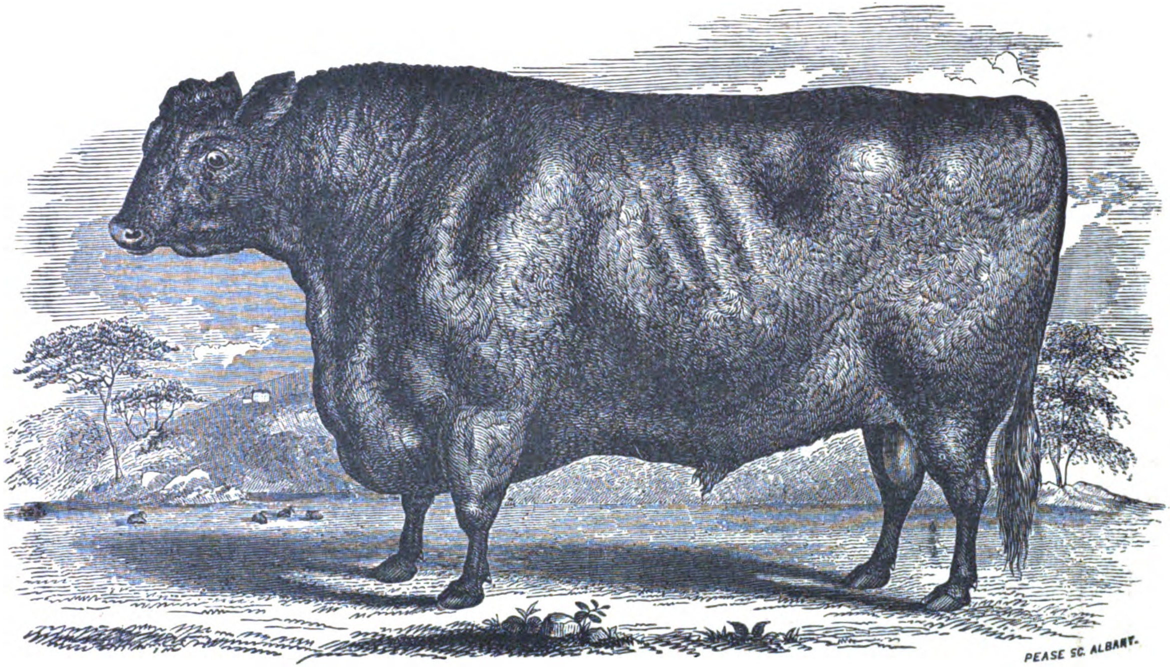
PEASE SC. ALBANY.

A GALLOWAY BULL:

To which was awarded the First Prize at the Highland Society's Show at Dumfries, Scotland, Oct. 1345.

[Engraved for "THE CULTIVATOR," Jan. No. 1847.]

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, JANUARY, 1847. No. 1.

OUR PLATE—THE GALLOWAY CATTLE.

THE beautiful engraving accompanying this number, is the portrait of a four years old Galloway bull, belonging to the Duke of Buccleugh, which obtained the first prize of thirty sovereigns at the show of the Highland Agricultural Society of Scotland, in 1845. We presume there have never been but few, if any, of this valuable breed of cattle in this country, and our object at this time is to give a correct idea in regard to them. The notion seems to be entertained in some quarters, that all polled or hornless cattle are Galloways; hence we have sometimes seen it stated that there are Galloways in Massachusetts, though it is very evident, from the description, that the stock has but few characteristics in common with the breed under consideration. Most of the hornless cattle to be met with in this country, correspond more to the Suffolk and Yorkshire polled breeds, than to any others of which we have any knowledge, and though they have in general a mongrel character, and degenerate appearance, they are no doubt much nearer allied to the last named varieties, than to the Galloways, as will fully appear from the following description. The true Galloways are described by LOW, YOUATT, and other British writers, as being generally of a black color, though sometimes red, brindled, and dun; but the black being regarded as most indicative of the pure breed, other colors have become more rare than formerly. They are, says YOUATT, straight and broad in the back, and nearly level from the head to the rump. They are round in the ribs, and also between the shoulders and the ribs, and the ribs and the loins. They are broad in the loins, without any large projecting hook (or hip) bones. In roundness of barrel and fullness of ribs, they will compare with any breed, and also in the proportion which the loins bear to the hook bones or protuberances of the ribs. When viewed from above, the body is said to appear beautifully rounded like the longitudinal section of a roller. "They are long in the quarters and ribs, and deep in the chest, but not broad in the twist. The slightest inspection will show that there is less space between the hip or hook bones and the ribs than in most other breeds, a consideration of much importance, for the advantage of length of carcass consists in the animal being well ribbed home, or as little space as possible lost in the flank."

"The Galloway is short in the leg, and moderately fine in the shank bones—the happy medium seems to be preserved. in the leg, which secures hardihood and a disposition to fatten. With the same cleanness and shortness of shank, there is no breed so large and muscular above the knee. while there is more room for the deep, broad, and capacious chest. He is clean, not fine and slender. but well proportioned in the neck and chaps; a thin and delicate neck would not correspond with the broad shoulders. deep chest. and close compact form of the breed.

"The Galloway is covered with a loose mellow skin of medium thickness, and which is covered with a long, soft, silky hair. The skin is thinner than that of the Leicestershire, but not so thin as that of the improved Durham, but it handles soft and kindly. Even on the moorland, where the cattle, during the greater part of the year, are fed on the scantiest fare, it is remarkable how little their hides indicate the privations they endure."

The Galloway cows are not remarkable for giving a large quantity of milk, but it is very rich in quality, and yields a large proportion of butter. Mr. YOUATT says, "a cow that gives from twelve to sixteen quarts of milk per day, [wine measure.] is considered a very superior milker, and that quantity produces more than a pound and a half of butter."

The Galloway breed of cattle is considered one of the mountains rather than the lower country. They derive their name from a district of country in Scotland. embracing portions of several counties. Mr. YOUATT observes that "there is, perhaps, no breed of cattle which can more truly be said to be indigenous to the country, and incapable of improvement by any foreign cross, than the Galloways." The same remark is made by Prof. Low. "The breed of Galloway," says he, "is peculiarly confirmed in its characters, and thoroughly adapted to the condition of the country." There is no doubt of the correctness of these remarks, and hence it results that all efforts to improve the breed by crossing it with others, have proved unsuccessful. According to Mr. CULLEY, a cross was tried in Mr. BAKEWELL's time, with the Dishley variety of the Long Horns, and at a later day, improvements have been attempted with the Short Horns.

Prof. Low in allusion to this, says "efforts have from time to time been made to cross the breed by the Dishley Long Horns, the Ayrshires, and the modern Short Horns. These attempts, it is believed, have been all failures, in so far as they were designed to improve the general breed of the country; and modern breeders with better khowledge, have turned their attention to the improvement of the existing race." Mr. YOUATT, in reference to the same subject, remarks, that the Short Horns have in many instances improved the stock of the districts where they have been introduced. "They have," he says, "at least in the first cross produced manifest improvement, although the advantage has not often been prolonged much beyond the second generation; but even in the first cross the Short Horns have done little good in Galloway, and as a permanent mixture the choicest southern [Short Horn] bulls have manifestly failed. The intelligent Galloway breeder is now perfectly satisfied that his stock can only be improved by adherence to the pure breed, and by care in selection."

The trade in stock from Galloway has been very extensive for 150 years, large numbers of cattle being annually sent to the English market. Prof. Low says, "It is computed that upwards of 20,000 head are annually exported from the district, from 16,000 to 18,000 of which are sold at Smithfield." They fatten as readily as the most celebrated breeds, and their beef is much esteemed in the English markets, the fat being well mixed with the muscular parts. Prof. Low says—"their average dead weight at three years old may be reckoned at 45 stones of 14 lbs. to the stone, [or 630 lbs.;] and those sent to London weigh from 55 to 60 stones, [or 770 to 840 lbs.]

From the characteristics of the Galloway cattle, as above given, we think there can be no doubt that they would be well adapted to a large portion of this country, and we should be much pleased to see them introduced here. In all situations in our northern states, where cattle are reared in a great degree for slaughter, we have good reason to believe that they would be found far more profitable than the stock now kept. A gentleman, distinguished for his knowledge of stock, who went to England a few years since for the purpose of making selections for a cattle importing company, stated to the writer, that had his object been to procure animals for the northern states, he should have chosen the Galloways and West Highlanders.

There is another matter connected with the Galloways, upon which it may not be improper to say a few words. They are generally regarded as having been one of the sources by which the Short Horn breed of cattle has been improved. We know the subject has been somewhat controverted, although if we may judge from publications, opinion in England is pretty well settled in favor of the position that the excellence of the Improved Short-Horns, is, in a considerable degree, to be attributed to a cross with the Galloways. The history of this cross has been frequently published, yet in connection with our main subject, we deem it not amiss to refer again briefly to the circumstances.

It appears from the best accounts which have been given, that when Mr. Charles Colling adopted the Short Horns and commenced his course of breeding, in the latter part of the last century, he found that breed of cattle generally subject to some very prominent defects. "Like all other extravagantly large cattle," says the Rev. Henry Berry, "they were frequently of loose make and disproportion." He adds that Mr. Colling, being sensible of the "difficulty of breeding, with anything like certainty, *large good* animals," was determined to reduce the size of the Short Horns, and at the same time and by that means, improve their form. With these objects in view, he resorted in the first place to the use of a bull called *Hubback*, an animal in relation to which there was formerly much controversy, principally in reference to the purity of his blood. Mr. Colling is reported to have tried several crosses with the Kyloes, or West Highland cattle, previous to his experiment with the Galloways. The remarks of Mr. Berry in regard to the circumstances which led to the trial with the last named breed, are of so important a character that we here transcribe them.

"It may be proper to observe," says Mr. B., "that no breed of cattle promised so successful a cross with the Short Horns as the Galloway. They were calculated, by their deep massive frames and short legs, to bring the Short Horns nearer the ground, and to dispose their weight in a more compact manner: their hardy habits would be essentially useful, and the quality of their flesh and hair were such as to render the experiment still more safe. Add to this that they could [then] be obtained of a red color; and we are prepared to admit even without the sanction of a successful experiment, that they were admirably adapted to cross with the Short Horn, standing frequently too high from the ground, not very well ribbed home, and not seldom of loose disjointed frame."

To the Galloways therefore, Mr. Colling resorted, and though his course met with little favor at the time, a few years experience served to establish his success almost beyond question. It appears that a very fine red polled Galloway cow was sent to Mr. Colling's Short-Horn bull Bolingbroke; the produce was a bull-calf, which Mr. C. purchased, and at a proper age, he was put to Joanna, a pure Short-Horn cow, and her produce was also a bull calf to which was given the name of Grandson-of-Bolingbroke. He was the sire of the cow Lady, whose dam was Old Phœnix, a pure Short Horn. From Lady sprung the family of Improved Short Horns which were formerly called in reproach "the alloy." At the time of Mr. Colling's celebrated sale, which took place in 1810, this family brought higher prices than any other *family*, and have generally been held in greater esteem since. Lady herself, though fourteen years old, brought 106 guineas, or $530; Countess, her daughter, nine years old, 400 guineas, or $2,000; Laura, another daughter, four years old, 210 guineas, or $1,050; Major and George, two of her sons, the former three years old, the latter a calf, g200 uineas, and 130 guineas, or $1,000, and $650.

As good testimony in regard to the family of Lady, we give the statement of Major Rudd, a gentleman who was very intimate with the Messrs. Collings, and who purchased the four highest priced animals, with the exception of the bull Comet, disposed of at Mr. Colling's sale. Maj. Rudd in a communication to the *London Farmer's Journal*, dated May 31, 1821, says, "I can truly declare, that after having had some experience during ten years, with different branches of the Ketton [or Colling] stock, I give the preference to the stock descended from Lady; and I know, also, that they are held in the highest estimation by Mr. Charles Colling, who was the founder of the Improved Short Horns."

Mr. John Hutchinson, formerly a distinguished breeder of Short Horns, under date June 14, 1821, in the paper abovementioned, thus strongly expresses his sentiments in regard to this Galloway cross:

"Of the produce of the cow Lady, respecting whose pedigree *A Yorkshire Breeder*, in his zeal for the public, expressed a desire to be informed, it cannot be necessary to say much, the opinion of that public having stamped a value upon them which neither the insinuations of rivalry nor the imputations of less creditable feelings, will be able to depreciate; and I am of the opinion that upon this instance of successful crossing, the advocates for that system may securely make their stand."

But notwithstanding this and much other testimony of a similar nature, it has been asserted in this country, that the cross with the Galloways failed to benefit the Short Horns in any particular, and that it was on the whole decidedly injurious. Though the Galloways, it is said, might gain by the intermixture, the Short Horns, it is thought could not be benefitted. Without any intention of entering into a detailed discussion of this point, we must be permitted to say, that from a careful and thorough examination of the subject, we see no occasion to dissent from the conclusions arrived at by the writers, from whom we have quoted above; and by a fair comparison of the characteristics of the two breeds, we think it will not be regarded as unreasonable, that the Short Horns, as they existed in Mr. Colling's day, should have been improved by an infusion of Galloway blood.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

[It is with great pleasure that we are enabled to present our readers this month, with the commencement of a new series of Letters from our esteemed and capable fellow-countryman, Prof. **Norton**, who, as we announced in our last, has again visited Europe, after spending two years with Prof. **Johnston**, at Edinburgh, to spend a year more with the most eminent chemists on the continent of Europe, in order the better to prepare himself for the Professorship of Agricultural Chemistry, to which he has been appointed in Yale College. We look with great confidence to the establishment of this professorship, for the most important results to American agriculture, knowing as we do, the high qualifications and sound practical views of Mr. **Norton**.—**Eds.**]

THE GREAT FALKIRK TRYST.

Edinburgh, Scotland, Oct. 15, 1846.

Messrs. Editors—It is not yet a month since I left America, and at that time the trees retained their summer hues, while the air was mild, clear, and delightful. Here I have dropped into the midst of the fogs, rains, chills, and mud, which became so familiar during my former residence. It has rained more or less every day since I have landed.

My stay in Scotland will, at this time be short, and I have but little time, therefore, to devote to observation of the country. One or two excursions I have already made, and hope to make one or two more.

On Monday last I accompanied my friend Mr. Jones, an Irish gentleman, who has been studying for more than a year in Prof. **Johnston's** laboratory, to the Falkirk October Tryst. Tryst is a Scottish name for a fair, and the Falkirk Trysts are the largest in the country. There is one in the spring, one at midsummer, and one in the autumn, between the 10th and 20th of October. The October Tryst is generally the largest, and is held during two or three days. The first day is devoted to sheep, and the second to cattle and horses. Falkirk is about half way between Edinburgh and Glasgow, an old and very dirty town, with nothing interesting except its antiquity and the fact that one of Wallace's battles was fought in its neighborhood.

We arrived there by railway from Edinburgh, and walked to the fair ground on the Muir of Stenhouse, a very large, open field, about three miles beyond the town. It has been occupied for this purpose during many years, being well manured by the animals brought for sale. Alternate crops of oats and grass are grown under certain restrictions as to the quantity sown at once, and the time of harvest. That is, the ground must be cleared before a specified day.

The day on which we attended was the sheep day. From 70 to 100,000 sheep are usually brought forward, and from 30 to 50,000 cattle. They come from every part of Scotland, even the most remote islands, so that every variety of breed peculiar to the country is to be seen. On this occasion the number of sheep on the ground was not so large as usual; the demand for them is now great, and the buyers had met many flocks on the roads, and turned them aside from their destination. The number however, was still very far beyond anything that I have ever seen. I could not make even a satisfactory *guess* on the subject. The scene was to me new and peculiar. The drovers, wrapped in their plaids, stood each over his own flock, and aided by his dogs generally contrived to keep it separate from all others; most of them spoke Gaelic, and when they got into dispute, which was not unfrequently, gave utterance, with abundance of gesticulation, to series of execrations and epithets, which sounded emphatic at least. Some stray sheep was continually darting off toward another flock, and the office of guardian was no sinecure. The colleys or shepherds' dogs, appeared to enjoy the business highly, and to understand what they were about almost as well as their masters. Their intelligence is really astonishing; I saw several who, when all their efforts to turn a fugitive sheep failed, gave up offensive measures and confined themselves to keeping near to it, following it into the midst of a strange flock, and remaining quietly by its side until some of the shepherds should come and catch it. Occasionally a young and imperfectly trained dog, in his enthusiasm transcended his duty, and thwarted the intention of his master; he always seemed, however, to become speedily aware of his error, and slunk away crest-fallen and abashed. The bargains are invariably cemented by a gill or *more* of whiskey between the seller and purchaser. There are tents erected for the purpose, where they sit and drink quantities of undiluted whiskey that would seem almost incredible in any other than a Highlander.

It is said that during the last thirty years, there has not been so entire a clearance of stock on the second day as on this occasion. Such was the demand for drovers to go to the south, that none could be engaged under $1.00 or $1.25 per day. It may interest your readers to know the prices obtained, at what is considered a remarkably good fair here. Black faced wethers brought from $3.50 to $7.50; one lot of 300 was sold at the latter price. Black Faced ewes from $3.25 to $4.00.

Cheviot wethers brought from $7.00 to $8.50; one lot of 1,800 and another of 1,000 at the latter price. Cheviot ewes from $5.50 to $6.25. Tups were chiefly black-faced, and brought from $10.50 to $25.

Cattle, three year old West Highlanders, Aberdeenshire, Skye, Polled, &c., brought from $25 to $50. Some very fine two year olds brought nearly as much as the latter price. These were mostly for feeding Some fat cattle brought $106. Cows were from $38 to $63. Horses from $29 to $190. One fine pair of draught horses brought $380.

Guano.—I have formerly written respecting the analyses of guano, made in the laboratory of the Agricultural Chemistry Association here. It is now somewhat difficult to obtain this substance of good quality, and the dealers are bringing forward some extraordinary samples, picked up by ships searching every part of the African and South American coasts. An analysis of a very singular one, lately made here, is now lying before me. Its composition is as follows:

	per cent
Moisture,	15.29
Water of combination,	14.31
Sulphate of Alumina,	26.55
Alumina and Oxide of Iron,	5.12
Gypsum,	0.59
Magnesia,	trace
Alkaline matter,	1.09
Insoluble Siliceous matter,	36.50
	99.45

This substance, it will be perceived, cannot be called a guano at all. There is no ammonia, and there is no phosphate of lime; these two ingredients constitute the chief value of a guano, and the source of its characteristic qualities; 66 per cent of the above is sand and water. It is not likely to be a refuse, as it would be quite valuable in its present state for the purpose of manufacturing alum, and a person who had intended to palm off a spurious composition upon the public, would scarcely send it for analysis. As yet no clue has been obtained to the manner of its formation. In appearance it is not unlike some of the Peruvian guano, and farmers will do well to be on their guard while such worthless compounds are in the market.

I leave for Holland in a few days, to study for a year in the laboratory of Prof. MULDER, one of the greatest physiologists and chemists of the present day. I shall endeavor from time to time, during my stay there, to communicate such experiments in the laboratory, or accounts of Dutch farming, as may seem likely to interest your readers. Yours, truly, JOHN P. NORTON.

RURAL NOTICES ABROAD.

ROYAL VETERINARY SCHOOL AT ALFORT.—Among the few objects which have interest for an agricultural eye, in Paris, or its vicinity, is the Royal Veterinary School of Alfort, distant some five or six miles from the capital. The name only partially explains its object; which is. a treatment of diseases in all the domestic animals, a study of the causes of such diseases, and means of prevention. The buildings, like all public buildings in France, are large, substantial and elegant. They are arranged nearly in the form of a square, consisting of stables, amphitheatre, lodges, lecture rooms, with conveniences for some three hundred pupils, beside a large number of professors. Students are admitted at a charge of something less than four hundred francs per annum, including board and tuition. A few are admitted gratuitously upon the recommendation of the minister of Agriculture; beside forty named by the Minister of War, for veterinary service in the cavalry.

The stables are arranged with admirable method and neatness; every stall numbered and ticketed with the disease under which the animal is suffering, and the date of its entrance. It of course serves as the regular hospital for the horses of the cavalry, beside which, any person is at liberty to place a sick animal in the establishment, at a certain fixed but low rate per diem. Slaughter of incurable cases is not uncommon, and a dissection of the subject in presence of the school.

At the time of my visit to Alfort, a horse sick with the glanders, was tied in the amphitheatre for slaughter and dissection the following day. Before I left Paris, I learned that one of the students engaged in the dissection, had accidentally cut himself during the operation. This is at all times regarded as dangerous, and particularly so in the case of an animal laboring under this disease. The most prompt medical treatment was resorted to; but the poor fellow suffered intensely for several days, and finally died.

Cows are received, and fed without charge; the establishment availing itself of the profits of the dairy, and reserving the liberty of practising occasional experiments in way of food, and habits of life. Sheep are received and fed upon the same conditions; swine are kept; and there is a minor establishment in connection with the larger for the treatment of sick dogs: we saw one little wiry haired terrier, howling about his double barred cage, in the incipient stages of madness. Nor did it heighten our sympathy for the little whelp, snapping at us through the bars, when the keeper told us that it had been a very quiet dog, before his inoculation with the disease.

A botanic garden forms part of the attachments, and a miniature park for the recreation of the pupils. These things together, make up an institution, which is an honor to the country and which. for the present. at least, we must content ourselves with admiring, without imitating. For if tried by the test, to which every thing of a public nature must be submitted in our country, it will be found that the veterinary school. like the garden of the Tuilleries, and the fountains of Versailles does not pay. That is to say, receipts in money do not balance the outlay of money. Whether increased inquiry, and stimulus to inquiry, do not more than make up the deficit on the balance sheets, is a way of considering the question, too heretical to be for a moment indulged in.

AGRICULTURAL IMPLEMENTS OF FRANCE.—Just out of the Rue St. Martin. one of the noisiest streets in Paris, is an old religious house, turned into a conservatoire of models of all useful machinery and agricultural implements. The French are not pre-eminent in this way: I fancy our paper-making, cloth-weaving, and board-sawing apparatus, (certainly in point of cheapness and ingenuity of contrivance.) would no way suffer by comparison with the beautifully arranged collection of the Rue St. Martin. Indeed the best models of the collection are of English origin, and English machinery and machinists are found in every city of France. One finds English engineers upon the boats of all their rivers. and is dragged by English locomotives along their railways. Only until recently have they been manufactured at all in France, and though showy in appearance, they are by no means equal to the English, in power or capacity for speed.

However this may be, our implements of Agriculture are nearly twenty years in advance of what may be seen at the Conservatoire. The more common hand instruments are of the most rude and clumsy construction; and plows, multiplied into every imaginable variety of shape and bearing, are totally eclipsed by a neat little American fabric which holds an obscure place in the collection. What would New-York farmers think of seeing a pitch fork with wooden tines, ticketed among the resources of modern agricultural art? and a hay rake, such as a "cute" country boy could make on a rainy day, with his jackknife and knee for lathe. and his thumb and fore finger for compass—displayed in the great Conservatoire of Paris! It is singular that a nation so nice and thorough in the more difficult scientific inquiries, should be so lacking in the more practical means of advancing their national interests. French scientific men have contrived most admirable means for boring the earth to the depth of sixteen hundred feet for water;[*] yet, for boring the earth only to the depth of a few inches, for bread.—the means are as paltry as any in the world.

Various ingenious devices found place in the collection, for drawing water, for shelling corn. and for cleaning wheat; but nothing essentially new. The scarifiers and harrows were more complicated, without appearing to be more effective than the American implements for similar purposes. It will afford good illustration of the lack of adaptation in the most common works of French craftsmen, when I tell you that there is not a window fastening in Paris, which would not furnish metal enough properly distributed. for a set of twenty-five in America; nor is there a pair of tongs, even in the palace of the Tuilleries, which would not make one of our Dutch housewives as sour as her pickled cabbage. No nation of Europe is so destitute of what we count Yankee cleverness as the French. And among none is it more manifest than with those peasantry who make up the agricultural population of the country.

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[*] The reader will recur at once to the famous well of Grenelle in the immediate neighborhood of Paris:—a well which has been sunk by means of chiselling, through rock. and sand, and gravel, to the depth of nearly 1700 feet; and which now sends up water through a tube of nine or ten inches in diameter, 120 feet above the surface of the ground. The history of its construction, requiring years and years of labor, will well reward the reader's attention. It may be found in any modern Encyclopædia, under the head of Artesian wells—so called form Artoise, in France, being the district where they were first sunk.

A French peasant can dance, but he cannot whistle; he can tip his hat with a grace that your Broadway lounger would sigh for, but he cannot put a new tooth into a broken rake. CAIUS.

* * *

NOTES OF A TRAVELLER IN ENGLAND.

AFTER a lengthened passage of thirty-two days, I reached the shores of England. Land was first seen after passing up the Irish channel about 100 miles, and the enthusiasm manifested by most of the passengers at the sight of land can only be realised by those who have experienced it. We were soon reminded that we were in the old world. The splendid mansions seen at the distance, with the cottages for the tenantry, the occasional view of some castle, the small fields, laid out with much regularity, all confirmed us that we were in a far different land than our own. On Sunday morning, early in May, we approached the coast of North Wales, where was spread out before us in the most lively colors, an interesting portion of Anglesea. In the distance rose, in all their majesty, the lofty mountains, Snowdon rising above all the rest. We entered the Mersey, and cast anchor about 3 o'clock in the P. M., and were soon on shore at Liverpool, the second commercial port in the kingdom. Liverpool has nothing very imposing in its appearance. The style of architecture is more heavy than in the United States, and the buildings being blackened with smoke, the general appearance is far less attractive than an American city.

The spacious and commodious docks in front of the town, are the pride and boast of the citizens. They are most magnificent structures, in which all the shipping are placed to discharge and receive their cargoes.

After a short stay in Liverpool, I took my departure, and travelled through the country, to witness the Agriculture of England. My expectations had been very highly raised, but the reality exceeded my highest anticipations. The neatness and order with which every thing was done, was truly surprising. On my arrival, the country was clothed with a richness of verdure perhaps unequalled in any other country. The farmers were engaged in weeding their crops of winter grain, wheat and rye, and in preparing their ground for the spring corn, which in some cases was being sown, or, as was most usual, drilled in.

Many girls, women, and elderly men, could be seen in the grain fields, clearing the drills of every weed—the men going before with a scuffle-hoe, and the others taking up the weeds and carrying them off to be burned. Many of these fields I passed which had been finished, and they presented a neatness and freedom from every noxious plant equal to the finest dressed bed in any garden. Nothing was left to interfere with the growth of the plant, and all the nourishment that could be derived from a congenial and richly prepared soil, was thus secured. How different this from America, where the contest often is, which shall succeed, the plant or the weed, and in many cases the latter proves the victor. Where the seed is sown broadcast, as is sometimes the practice, though not general, the same care is taken in removing everything that interferes with the growth of the grain. Here, it struck me, was an example worthy of all imitation. Let the American farmer but practice it, as far as he can consistently, and that an increased return would be the result, no reasonable man I think will doubt.

In the preparation of the soil, I noticed a careful attention to the removal of sods, and everything that would impede the free and healthful growth of the grain. After the ground had been plowed and carefully pulverized by the harrow, persons, mostly females, passed over the land, gathering every particle of grass that appeared, depositing it in heaps, where it was burned—then a heavy roller or crusher passed over the land until it was entirely pulverized, and the seed then sown in drills. It was evident that by giving attention like this to the ground, everything was done to secure the return of a bountiful crop. Why may not the like attention be given to our land, and would not the result be such as to amply remunerate the farmer. Let the experiment be made, and I doubt not it would often be repeated, until it shall become as general as it is in England.

The fields are usually laid out with great regularity, bounded by hedges or raised mounds of earth, covered with sods, with small trees at short distances, presenting a most interesting and delightful sight. Indeed, the country appears thus far, as a highly cultivated garden, and should it, in my progress equal, or, as I understand it will, improve upon this, my first examination, I shall have occasion to admire the perfection which has been attained.

THE GRAIN-MOTH—*TINEA GRANELLA.*

EDITORS CULTIVATOR—No distinct account of this noted insect, has, that I can find, ever been given to your readers. Perceiving that you are inclined to regard the "flying weevil," of which Mr. OWEN has favored us with such exact and valuable details in the July and November numbers of the Cultivator, as the *Tinea granella*, I am induced to send you a sketch of the characters and habits of this species. From this it will be obvious that it is widely different from the insect which Mr. Owen describes.

The European Grain-moth, (*Tinea granella*, as first named by Linnæus,) is nearly or quite two-fifths of an inch long. It has a tuft or crest of white or yellowish-white hairs on the forehead; short, thread-shaped, (i. e., not tapering,) brown antennæ; a very short spiral tongue; its feelers thread-shaped and not directed upwards. The upper wings are whitish, with dark brown spots, and dots, which often run into each other, and thus present a "marbled" appearance; and there is always near the middle of the outer margin (which is the anterior margin when the wings are spread,) a somewhat square blackish spot, with two dots on the margin back of it, and also a blackish mark from it slanting backwards nearly across the wing. The hind wings are smaller, of a dark lead-color, with long fringes at their hind edges or ends.

The worm or larva of this moth, when full grown, is scarcely less than half an inch in length; it is soft, cylindrical, nearly or quite destitute of any hairs, light yellow, or buff colored, with a brownish-red head, and two brown stripes across the neck. It infests bins of wheat, rye, barley, oats, and probably corn, in granaries, storehouses, and mills.

There appears to be two generations of this insect in a year—the winter generation occupying ten months, and the summer generation only about two. The winged moth appears in July and August, flying by night only, about buildings where grain is stored

The female places but one or two eggs upon a single kernel of grain, till her whole supply, thirty or more, is expended. Some of these are deposited upon ripe or nearly ripe grain in the field, but most of them upon stored grain. According to M. Kollar, the worm when it first hatches, burrows within the kernel; but if this be so, it is certain that it soon becomes too large to remain in such straightened quarters. It attaches another and another kernel to the first, by a fine silken web, until it covers itself in a tube made up of whole and partially eaten kernels, and its own excrements, which are white, roundish little grains, the whole being held together and lined by the web which it spins. Hence, the contents of the bin become "lumpy," from the kernels thus hanging together. The worm grows until its cell becomes too small for it; it then forsakes it, and wanders about over the grain, spinning a thread as it crawls along, so that if numerous, the whole surface of the grain in the bin is coated over with these threads. At length, having found a suitable corner or crevice, it crawls into it, gnaws the wood around it into fine chips, which it connects with silken threads into a kind of cocoon. Without eating anything more, the worm lies dormant within its cocoon through the winter, changing to a pupa or chrysalis in the spring, which sends out the winged moth in May and June. These moths lay their eggs, and the worms of this second or summer generation complete their transformations and evolve the winged moth again in about two months, as already stated. It is therefore from May till September that these worms are found among the grain, and during the rest of the year they lurk in the cracks and crevices of the building.

The remedies against this worm are much the same as those noticed by Mr. Owen, for preventing or destroying the flying weevil. Kiln-drying the infested grain is certainly the most effectual way of ridding it of this and of several other insect depredators. All cracks and fissures about grain bins should be filled with mortar or cement. The naturalist Rosel, found that common salt killed the larva of the Grain-moth, and he therefore recommends mixing fine salt directly with the grain, or washing the bins with a strong brine before filling them, and keeping the grain covered at those times when the eggs are deposited, with cloths moistened with brine.

This insect, or one possessing habits closely analagous to it, and equally injurious to stored grain, certainly exists in this country. A few days since, on examining a small quantity of wheat that had lain undisturbed nearly a year in the mill of Wm. McNeil, at East Greenwich, in addition to three species of perfect insects, and two others in their larva state that are now rooting in it, the webs of the Grain-moth, holding the kernels loosely together in lumps, and thickly interspersed with little white roundish grains, the castings of the worm, were found in abundance. An adjoining bin, the wheat in which had lain about six months, also had many of these webs in it. But the following facts merit a notice, as points in which our insect does not correspond with the accounts given of the European species. 1st. A careful probing of the cracks and crevices around these bins and in other parts of the same loft, failed to bring out any worms belonging to the moth tribe. 2d. There were no threads spun over the surface of the grain. 3d. On carefully opening the webs found among the grain, the dry and brittle skins or cases of the *pupæ* were invariably found within them. These varied from a pale chestnut to a light yellowish-brown color, the largest ones measuring two-fifths of an inch in length, by three-twentieths in breadth. The shrivelled relicts of the larva are also found at the tip or pointed end of these pupa cases. Hence it is certain that the worm of our American Grain-moth remains in its web among the grain, instead of crawling away into some crevice to form a new cocoon; and the winged moth issues directly from the grain, instead of from the cracks in the walls.

That the insect which we have now considered is very different from the "flying weevil," is sufficiently apparent; but that this latter is identical with the Augoumois moth of Europe, (*Anacampsis? cerealella*, as the species was first named by Olivier,) I think the descriptions given by Mr. Owen come as near demonstrating, as words well can do. The Augoumois moth has but very few characters by which to distinguish it. About all the specific marks pertaining to it, are the following: It is somewhat under two-fifths of an inch long, has a gloss or lustre like satin, and is throughout of a uniform cinereous color, (brownish white, the well-known color of wood ashes,) the upper wings being light brown, and without any spots or marks. Latreille, however, differs from other describers in pronouncing the insect to be of a brownish cream color. Now Mr. Owen's account shows the flying weevil to be of the same size, and the same lustre; and of its color he says,—the upper wings would be called gray in common language, though they might be termed cinereous or ash-colored by entomologists, and they have a bluish tinge towards their bases, and "towards the tips a yellowish tinge." Here is evidently the "brownish cream-color" of Latreille. The habits of the two insects, moreover, appear to be identical throughout. The worms of both are so minute that they live entirely hid each within a separate kernel of wheat, eating its interior until it becomes a mere shell; and the winged moth comes directly out of the kernel by pushing open the tiny door that the worm had previously fabricated. They correspond even in the curious particular, that each worm builds a web-like partition across the minute cavity in which it lives, on one side of which partition its castings are placed, whilst the worm resides in the clean apartment upon the other side.

It is not fully settled, that I am aware, to which one of the modern genera the Augoumois moth belongs. The two long feelers, curved up over the head like horns, with their last joint naked, and probably longer than the second joint, together with the antennæ and wings, so far as their characters appear from the well executed drawings and descriptions of Mr. Owen, strongly indicate that the insect belongs to Mr. Curtis' genus *Anacampsis*. Nothing but perfect specimens, however, can enable any one to determine so nice a point as this; and I rejoice to perceive, from the Prairie Farmer of April last, that such specimens are at length in the hands of Dr. Harris, whose extensive acquaintance with the almost numberless moths of our country pre-eminently qualifies him for settling every doubtful point respecting this and similar species. Specimens both of the moth and its parasite would be very acceptable donations from Mr. Owen to either of us; but if three or four only of the latter can be procured, let them be forwarded to Dr. H. From his exertions in obtaining authentic materials for completing an account of this species, such specimens would, of right, belong to him. It cannot but be deeply regretted by every agriculturist and friend of science in our land, that the amount of time required for the discharge of his official duties in the University, is at present depriving us of the numerous and valuable contributions to the entomology of our country that we should otherwise be favored with from him. A. FITCH.

Salem, N. Y., Nov. 17, 1846.

PARSNEPS FOR HOGS.—The Prairie Farmer says they are the best of all roots for this purpose, and states that a hog, 22 months old, and weighing alive 750 lbs., never ate anything but raw parsneps and sour milk.

SCIENCE OF MECHANICS, APPLIED TO AGRICULTURAL PURPOSES.

In the construction of the more perfect and complex machines used in the arts, the principles of mechanics are closely studied in givnig a due proportion of lightness and strength to every part. But in the more simple and common implements for the farmer, mere guess work too often becomes the only guide. It appears to some altogether trifling, to attempt to apply with precision scientific principles to the shaping of a hoe-handle or a plow-beam. Yet a little reflection will show that it is a matter not to be summarily rejected.

The simplest tool, which is constantly used, should be formed with a view to the best application of strength to effect the intended purpose. The laborer, who makes two thousand strokes with the hand-hoe in an hour, or twenty thousand in a day, should not wield a needless ounce of weight in the implement. If any part be made unnecessarily heavy, even to the amount of half an ounce only, the force repeatedly expended to keep this in constant motion, amounts in the aggregate to no less than twelve hundred and fifty pounds a day, or requires a force equal to the moving of that amount, which ought to be exerted against soil and weeds. Again, a farm-wagon usually weighs nearly half a ton; many of them might well be reduced 50 lbs. in weight, by reducing the size or altering the shape of parts where strength is not needed, without at all lessening the strength of the vehicle. Calculation will show, then, that the amount gained every year, by this reduction, to every farmer who drives his wagon on an average only five miles a day, will be equal to the conveyance of thirty bushels of wheat to a distance of forty miles. Similar estimates might be made in many other cases; and if all the improvements were thus made which might be, the whole gain would be by no means trifling.

We shall endeavor to illustrate this subject by a few examples. In the construction of the simplest tools, as the handles of hoes and axes, rakes, and pitch-forks, a form convenient for grasping by the hand, as well as for strength is needed. The common axe-handle is usually well formed for both these purposes—the flat shape, for strength, edgewise, and with the greatest width at the entrance of the socket, where most strength is required. Fork handles are often well made, but not unfrequently are quite defective in a combination of strength and lightness. The greatest strength being needed at the middle, where fracture usually takes place, they should here be of larger size, at the same time that full size must be allowed for a perfect fitting of the prongs to the handle. In fig. 2, *a* shows a well-formed handle, and *b*, one badly formed. Hoe-handles, not needing much strength, lightness and convenience for the grasp of the hand, should be mainly sought. For the latter purpose, there should be an enlargement at the upper end, to prevent the hand slipping; the rest should be nearly of equal size throughout. For lightness, the weight should be lessened as much as possible towards the blade, nearly all the motion being in this direction, the upper end being in a manner the centre of motion; hence it is highly important that the lower part be made as slender as possible, that the constant movement be not impeded by a needless ounce. The chief reason that the old hoes, with a large ring or socket attached to the blade, were so much less effective than the best modern hoes, was the large and heavy form of the lower part of the handle. Fig. 3, represents two hoes, *a* being a well-formed handle, and *b* a clumsy one. Rake handles are usually made so as to break in the middle; hence, the size should be there increased, and diminished at the ends. The same remark applies to the heads of rakes. Horse-rakes should be made as light as possible; the head or main bar is usually of the same size throughout, but it may be much diminished in weight by an observance of the principles of mechanics. Plow-beams are often unnecessarily cumbersome, the greatest strength being needed at the junction of the mould-board, the least near the forward end, or farthest from the centre of motion. It very rarely happens that the beam ever breaks just back of the clevis, hence this part may be often much lightened.

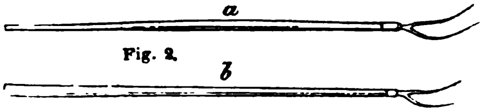


Fig. 2.

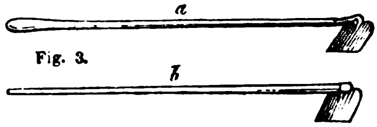


Fig. 3.

The limits and character of this article will not admit of a full or accurate examination of the mathematical principles, applying to the construction of implements and machines; but a few of the principles of almost constant application may be superficially explained by figures. If a bar of wood, *a*, fig. 4, is set, fixed in a wall, to support a weight at its extremity, it will possess as much strength for this purpose when it has the form exhibited in the figure, as if of an equal size throughout; that is, a considerable portion of a bar of equal size may be cut away without lessening its strength.* The same reasoning obviously applies to a bar supported at the middle, with a weight at each end. It also follows as a matter of course, that the same shape is to be given to each part as to the single one in fig. 4; and would therefore be of the form represented in fig. 5. The shape is not altered when it is supported at the ends, with the weight at the middle. Hence this form, or one similar, becomes the proper one for many purposes in practice, as for instance, the rounds and bars or poles of ladders, the bars of whippletrees, fork handles, &c.; and the half length as in fig. 4, for

Fig. 4.

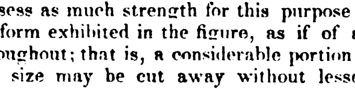
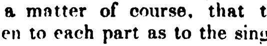


Fig 5.



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* If accuracy is required, the following rule is to be observed. The bar is to be diminished, in passing outwards from the wall, so that the breadth multiplied by the square of the depth shall always bear the same proportion to the diminished distance from the outer end:—That is, if *b c* be the depth at any place, then *b d* must be as the square of *b c*. This is on the supposition that the two vertical sides are parallel; if, however, the stick tapers on all sides alike, then *b d* must be as the cube of *b c*. In the former case, the lower edge of the bar will have a cubic parabola as the curve of its taper, the upper side being straight; and in the latter, the curve would be a common parabola. If the weights press on all parts of the bar alike, the form will be somewhat different.

rake teeth, fence posts,* the tongues of wagons and carts, wheelbarrow handles, spade handles, &c. This form must however be modified to suit circumstances, as for instance, whippletrees must be large enough at the ends to secure the iron hooks, and wagon tongues for the ironing at the end. The axletrees of wagons and carts, must not only be made strong in the middle, but also at the entrance of the hub, the wheels, when thrown sideways, operating as levers to snap them off at the latter point. The annexed figure, (fig. 6,) shows two forms of a cart axle, *a*, unnecessarily heavy, as too often made, and *b*, the improvement. Ladders are often required to be very light, but their weight, as usually made, may be considerably diminished by lessening the ends of the two poles, and also tapering the rounds to each extremity, by which smaller holes are needed for their reception, and the poles consequently may be smaller. Where various forces are to be resisted, attention must be given to all; for example, in the spokes of wagon wheels, much strength is required at the hub for stiffening the wheel laterally; they must be strong at the middle to resist the contracting pressure of the tire; and of sufficient size at the circumference, where they are apt to be weakened by decay, from constant exposure to mud and water.

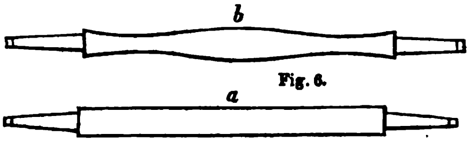

Fig. 6.

The best form is nearly a uniform taper towards the outside, with a sudden enlargement at the outer extremity.

A rule of very general application in constructing machines, &c., is, in all rectangular bars or beams, the strength increases as the breadth, and as the square of the depth. Thus, a timber 4 inches wide, and 6 inches deep or thick, is twice as strong as a timber 2 inches wide and 6 deep; and one 2 inches wide and four deep, is four times stronger than one 2 wide and 2 deep; or if 6 inches deep, it is 9 times stronger. The same rule will show that a board 12 inches wide and 1 inch thick, will support 12 times as great a weight when edgewise as when lying flat. Hence the increase of strength given to whippletrees, fence-posts, joists, rafters, string-pieces of farm bridges, &c., by making them flat, or narrow and deep, may be precisely known. Again, the strength of a round stick or pole, (cylinder,) increases as the cube of the diameter increases; hence a stick 3 inches in diameter is 27 times stronger than a stick of equal length one inch in diameter. Hence, when an increase of strength is needed in round bars of wood, as for the handles of tools, or spokes of a ladder, this rule may be easily and accurately applied.

These remarks might be extended to almost any length, did our limits permit; our object, however, is merely to direct attention to the importance of the study. All who construct implements should understand the subject thoroughly; and farmers, who must know how to choose good from bad ones, should be able, as far as practicable, to select those which are well made, and equally strong in all their parts, and avoid those which are defective or unnecessarily cumbersome, without the long and costly process of purchase and trial. T

MANAGEMENT OF BEES.

EDITORS OF THE CULTIVATOR—The destruction which took place among bees, last spring, has caused much inquiry respecting the cause. Believing that I can throw some light on the subject, I proceed, without further comment, to make a few remarks.

I commenced keeping bees in March, 1813, with only one swarm, and by the increase of this, in a few years, I was in possession of twenty hives—wintering nearly that number a great part of the time till the last season. Soon after I commenced, I occasionally lost hives of bees, and on examination, I found that the young had died in their cells, where they had turned black, and produced an offensive smell. Why the young should thus die in the cells, was a matter to which I directed much inquiry. I had read several authors on bees, some of whom described the dying of the young bees in cells as a *disease*, but pointed out no satisfactory course or remedy. In the month of June, about twenty years ago, I had five young swarms come out about ten o'clock in the forenoon. The weather being very hot, they all came out in the course of fifteen minutes, and were hived. In the after part of the day, there was a thunder-shower, which brought the wind north-west, and the weather turned cold, giving frost the next morning, on low land. The consequence was, the five old swarms from which the above young ones came, failed to increase. I attempted to winter them, but the following spring, they were all, except one, dead. I then broke out the combs, and found dead young in the cells. This led me to the cause of the death of the young bees.

Two years after this, a similar case occurred. After the bees swarmed, it came off cold as before. At night, I covered the old hives that sent forth young, with bed-quilts and blankets, and on removing them the next morning, I discovered the bees were lively, humming at the lower entrance of the hive, and it was evident from the bursting of the caps of the cells at the entrance of the hive that the process of hatching had gone on as well as in a warm night. In eight days those old hives swarmed again, and some a third time, still leaving the old hives well stocked with bees. From that time till now, (fifteen or twenty years,) I have not lost a single swarm of bees by the young dying in the cells.

From this discovery and remedy, I have come to the conclusion that there is no disease in the young bees, while in the cell, that would cause their death or that of the parent stock. We all know among the feathered tribe, it is necessary to keep up a certain degree of heat by brooding, or otherwise, in order to produce young from the egg. Should a hen sit on her eggs one week, and then leave them until they were perfectly cold, no future sitting would hatch them. Now, if the case in regard to the eggs may be properly called a *disease*, then we may say that the young bees in the cells die from disease. But it is well known that bees will recede to the upper part of the hive, when the weather is cold, and whenever this takes place, while the brood comb is filled with young, they invariably die.

This brings me now to speak of the past season, in which so many valuable swarms of bees have died. It

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† Strictly speaking, the pressure being on all parts of a fence post alike, it should be in the form of a wedge, with straight sides. Hence, a fence post of equal width throughout, contains twice as much timber as is needed for strength merely.

will be recollected that the beginning of April last, was very warm and pleasant, and from the putting forth of early blossoms, such as those of the willow, alder, red, or soft maple, the bees commenced their labor with great activity, bringing in pollen and honey in such quantities, that their cells and the brood comb, were soon filled. About the 20th, or 25th of April, it was severely cold, lasting several days. This drove the bees up from the brood comb, and the young died in the cells. In my experience of thirty-three years in keeping bees, the last spring was the first time that the young died in the cells before swarming time. Out of eleven stocks which I had last spring, I lost five. My observation in regard to bees teaches that a full colony will secure themselves from cold, or from the moth, which is a good reason for putting back second and third swarms. In wintering bees, I have tried burying in a sand-hill; sometimes have put them in the cellar, the garret of the house, &c. I have had them do well in all these places, and have experienced great losses in all of them. In reflecting upon the subject, I have been led to the construction of the proper house for the wintering and summering of bees. I built one about two years ago, 10 by 24 feet, which will accommodate twenty-four swarms in the summer season, and double that number can be wintered in it. I had but two swarms in this building last April; but by closing my bee-house a few days in the cold spell of weather the last of the month, those two have done as well as bees do in most seasons, swarming and making honey; whereas those that were out, died, as before stated, and many people in this vicinity lost all their bees. In the October number of the Cultivator for last volume, page 305, mention was made of my bee-house, stating that a further explanation was expected. I have not now time to give this explanation, and perhaps it is less necessary, as I am compiling a manual on the management of bees, in which I shall show the advantages of my house by diagrams exhibiting all its parts. Hives of any construction can be kept in it. There are many patent bee-hives; that of Colton's, of which an engraving was given in the December number of the Cultivator, I think well adapted to the economy of the bee, and as it is double on every side, or nearly so, is well calculated to shield the bees from the cold as well as heat. I shall try it the coming season, when I shall be better prepared to speak of its utility. NATHAN HOWARD

Stephentown, N. Y. Jan. 1, 1847.

WEEDS INJURIOUS TO THE WHEAT CROP.

MESSRS. EDITORS—I send you the following, for publication in "The Cultivator," about the *Lithospermum arvense*, which, in different sections of the United States, has the names of Pigeon Weed, Red Root, Stone Weed, Corn Gromwell, &c.

DESCRIPTION.—Stem, 12 to 18 inches high, much branched, and whole plant hispid, with short oppressed hairs. Leaves, lance-linear, acute, with a midrib. Lower leaves often obtuse. Flowers, solitary, subsessile and axillary. Corolla, white, or yellowish white. Calyx, segments acute, hispid celiate. Nuts, rugose, ovoid, with the acuminate beak rather oblique. Root, annual.

In the artificial or Linnean System it belongs to the Class Pentandria, order Monogynia, and according to the Natural System, it is placed with the Boraginæ, or Borage tribe of plants. It is a great pest to the wheat crop, by outgrowing and smothering the young wheat in the spring; generally arriving at maturity in Western New York, in the month of June, two or three weeks before the wheat harvest. Its seeds yield a small quantity of oil, being worth at the oil mills from 31 to 37 cents per bushel. But this is a poor compensation for the damage done to the farmer.

It is a native of Europe, where it is frequent in cultivated fields and pastures; yet it does not seem to prevail to such an extent as to do much damage to the wheat crop, since little notice appears to be taken of it by their agricultural writers. Loudon, an English author, in his Encyclopediæ of Plants, merely states that the bark abounds with a deep red dye, which stains paper, linen, &c., and which is easily communicated to oily substances, resembling in this respect the Alkanet root—hence it is often called in England the bastard Alkanet. The country girls in the north of Sweden, stain their faces with this root on days of festivity.

Besides the arvense, there are nine other species enumerated as growing in Great Britain, and in Decandolle's Prodomus, we find sixty-five species described, most of which are natives of the old world. The "Red Root," is widely diffused, growing in nearly every part of Europe; it is a native of Northern Africa, according to Desfontanes, and was found in Southern Africa by Burch. It grows near the river Euphrates, in Asia, where it was collected by Chesney, and also in Asia Minor, according to Aucher. It has probably been greatly spread by the migration of birds, since many species of birds void their food when they find something that suits them better. Thus it is supposed to have been often spread in this country, and hence one of its names, "Pigeon Weed."

It has been introduced into America, and is already spread through a large portion of the wheat growing states. It grows in the vicinity of Charleston, South Carolina, according to Elliott, and from our Botanical Catalogues, we find that it abounds in Kentucky, Ohio, and the Western States, in Maryland and Virginia, and in Vermont and Massachusetts, and every farmer knows that it is found, more or less, throughout the Middle States. There are five or six additional species growing in the United States, a new species having lately been discovered by Dr. Chapman in Florida. In Yates Co., there are two species, the arvense and latifolium. To return to the arvense—when it has once obtained possession of a field, it is eradicated with difficulty, as its seeds will lie in the ground many years without germinating, especially when they are covered to a depth which prevents them from receiving a due proportion of air, warmth and moisture.

It is only by studying its nature that we can arrive at any sure method of exterminating it. Seeds of every description rarely fail to germinate immediately after becoming ripe, if they are covered at a slight depth with moist, warm soil, before they get dry and hard. The Pigeon Weed, or Red Root, ripens some weeks before wheat, and if the season be dry, the seeds, by being deprived of their natural moisture, will not germinate unless they are placed under very favorable circumstances, viz. be slightly covered with a moist. warm soil. Its seeds are very hard, hence its botanical name, which is derived from two Greek words, signifying stone and seed, so that they are under all circumstances most difficult of germinaton. Hence, after the wheat harvest, they generally lie upon the surface of the ground, without germinating, until by subsequent cultivation of the soil, they are nursed into life. It may be, that if they are buried to a great depth, by the first plowing after wheat, and the subsequent plowings are not quite so deep, that they will remain unchanged for years, and the farmer may suppose that his soil is free of the pest, until deep plowing brings them to or near the surface, where the conditions are favorable to their germination. Prof. Lindley, in the third edition of his Introduction to Botany, mentions that he had three plants of Raspberries, which had been raised from seeds found in the stomach of a man whose skeleton was found thirty feet below the surface of the earth, near Dorchester, in England. He had been buried with some coins of the Emperor Hadrian, and it is, therefore, probable that the seeds were 1600 or 1700 years old. A new kind of Pea has lately been grown in England from seeds found with a mummy, in Egypt, where they had been entombed perhaps thousands of years. There is no doubt but that the seeds of Lithospermum arvense will, under favorable circumstances, retain their vitality without germination during many years. Seeds, to germinate easily, must be near the surface. This is an established law of nature adapted to the circumstances in which most seeds are placed that grow upon the surface of the globe. They grow, ripen, and fall to the ground to be washed into the soil by rains, or commence germinating at the surface and send their roots into the ground. Therefore, to eradicate Pigeon Weed, we would recommend, if the ground be wet, or sufficiently moist, to have it thoroughly gone over with a sharp toothed harrow, early in the fall, succeeding the wheat harvest. That is generally a busy time with farmers, and the harrowing could be done much easier than a shallow plowing. Besides, if the business is well done, the seeds will be covered to the depth which nature requires, and hence they will germinate, and can easily be destroyed by plowing the ground for a crop in the spring. If plowing be done in the fall to cause the seeds to germinate, it should be as shallow as possible, not to exceed two or three inches in depth, and then the ground should be immediately harrowed. This will be very effectual, and by plowing the ground in the spring, the weed will be killed. Another excellent method is to plant the wheat stubble the succeeding spring with corn, well manured, and then sow with barley the next spring. We have remarked that the Lithospermum, if there be any seed in the ground, generally germinates in the fall on corn stubble. By this course, if the manure contain any seeds, they will also be destroyed by the succeeding spring's plowing for barley. If our farmers will practice the above methods, and be careful to have clean seed wheat, they will soon rid themselves of this great pest to the wheat crop. S. B. BUCKLEY.

WINTER CALCULATIONS FOR FARMERS.

FUEL.—Every farmer knows that a green stick of wood is much heavier than a seasoned one. If a stick of beech or maple, or of any other wood commonly used as fuel, be weighed when first cut, and again when thoroughly seasoned, it will be found to have lost about one third of its weight, which is, of course, the water in the wood, evaporated by drying. How much water is there, then, in a single cord of wood? There are 128 cubic feet; deducting two-fifths for the interstices between the sticks, leaves 77 solid feet of wood. One-third, or 26 cubic feet of this is water, which is equal to more than six barrels, the quantity in every cord of green wood. The teamster, then, who draws in one winter, a hundred cords of wood to market, loads, draws, and unloads, more than 600 barrels of water, which he need not have done had the wood been cut a year sooner and properly seasoned. How much would he charge for drawing those 600 barrels, in water, separately?

Again—In burning green wood, the water, in the wood, being cold, is heated from freezing to boiling. In the consumption of every cord of wood, therefore, six barrels of water are thus made to boil, the heat of the wood passing into the water, instead of being liberated and becoming available, as would be the case if the wood was dry, and no water to heat. Many of our villages, containing two or three thousand inhabitants, consume each year five thousand cords of wood, one-third of which, at least, or sixteen hundred, is green. Hence, the people of such village are at the needless expense of boiling about ten thousand barrels of cold water yearly. How many village taxes would the expense of doing this, pay?

Again—It is ascertained that the heat required to *evaporate* a barrel of water, *after* it is heated to boiling, is more than five times that required for the heating. That is,—if a vessel of cold water be placed over a fire, and a half hour be required to heat it from the freezing to the boiling point,—then it will be found to require five more half hours to evaporate all the water. Consequently, in burning a cord of green wood, the heat required to drive off the six barrels of water in steam, which must be done while the wood is burning, is five times as great as the mere boiling of the water, or equal to heating thirty barrels to boiling. Hence, the farmer who burns twenty cords of green wood in a winter, as many do, also performs the needless task o evaporating sixty barrels of water, which is equal to heating to the boiling point no less than six hundred barrels.

Is there any mistake or error in these calculations? Then let it be pointed out. The weight of water in a green stick, may be easily known by first weighing it, then seasoning it by the stove a few weeks, and weighing again. In this way the quantity of water in a cord may be determined without mistake. The heat required for evaporating can be ascertained by experiment. All the other calculations follow as a matter of course, and contain no material error. Now is the time for every one to have his wood cut a year in advance, and, if possible, two years, so as to season one year under shelter.

Again—It has been found that in a common *fire-place*, the loss of heat which escapes through the chimney, is nine-tenths of the amount caused by the consumption of the wood; that is, nine-tenths are lost. This has been determined by comparing the quantity of wood needed to heat the same room equally, where a fire-place, and a stove with forty feet pipe, were each used. Hence, the village which burns a thousand cords of wood in fire-places, expends nine-tenths of this amount, or nine hundred cords, in heating the air above the chimney-tops. Through the chimney of a large *fire-place*, there is a current of hot air, a foot square, and moving four feet a second. That is, four cubic feet of hot air are sent out into the wide atmosphere every second, which is equal to eighty-six thousand cubic feet in twenty-four hours, the amount which every farmer, who uses an open fire-place, contributes to the winds.

Feeding Domestic Animals.—If one cow daily treads three pounds of hay under foot in the mud, she will waste about a hundred pounds per month; or a herd of twenty cows would waste a ton per month. At this rate, how many times, every ten years, would the quantity wasted pay the expense of making feeding boxes and racks?

Watering Cattle.—Many farmers suffer a loss by not providing good and convenient water for their cattle. An animal that is compelled to go half a mile over a slippery road, and chased perhaps by dogs, cannot gain in flesh by the operation. If a cow has to travel twice a day half a mile to water, and return, she travels two miles a day;—or ten cows perform twenty miles of travelling per day, and two thousand miles each winter.

Gates.—Every field on the farm should be entered by a good self-shutting and self-fastening gate. Farmers, who are too busy in summer to make them, or get them made, should see to it now. How long does it require to take down and put up a set of *bars?* At least two minutes; which if repeated three times a day for a year, amounts to thirty hours, or three days of working time—which would yearly pay for a good gate. Or, examine it in another point of view,—three times a day, is eighteen hundred times a year; now, is there any man between Halifax and California, who would take down and replace a set of bars eighteen hundred times in succession, in payment for a farm gate? Hardly—yet this is the price yearly paid by those who use bars that are constantly passed, and the gate is not obtained by it. Again—how much better is a well-hung gate, than one half-hung?—or one with a good self-fastening latch, than one with a pin crowded into an auger-hole? Try it by dragging a badly hung gate over the ground, eighteen hundred times in constant succession, securing it each time with a pin, and see if you do not think this labor would pay for good hinges and a latch. T.

SKETCHES OF MASSACHUSETTS FARMING.

During the latter part of November and the beginning of December, we made a hasty excursion through some portions of Massachusetts. From the season of the year, we could see no growing crops, nor make particular examinations of soils, yet we had the opportunity of seeing and conversing with the farmers, of viewing their stock, buildings, fences, and stored products, and of learning something of their general management. We give, under their appropriate heads, some remarks on the different subjects which came under our notice.

Swine.—Massachusetts has been long in possession of excellent swine-stock. The celebrated Bedford or Woburn breed, was first introduced here by the late Col. **Timothy Pickering**, many years since, and from its extensive dissemination, perhaps, effected a more general improvement than any other variety has done. Most of the other esteemed English breeds have been introduced at various times, and in the hands of different individuals, have received a pretty thorough trial. Though but few of these breeds can now be found in their purity, yet such has been the improvement resulting from their introduction, that many animals can be found which are well adapted to the circumstances in which they are placed, and the purposes for which they are designed.

In our November number, (last volume,) in speaking of the different varieties of swine, we mentioned the Mackay breed, and expressed some doubt, whether many of the genuine stock could now be found. We are gratified, however, in being able to state, that during our recent visit to the Bay State, we ascertained, for a certainty, that there are still "a few more left of the same sort." Col. **Jaques**, of the Ten Hills' farm, near Boston, has three boars, and one sow of the true Mackay breed. In 1831, Col. J. purchased of Capt. **Mackay**, his entire breeding stock of swine, consisting of several boars and sows. Many obtained the stock from Col. J., and, among others, J. P. **Cushing**, Esq., and the Hon. **Daniel Webster**. From these gentlemen it became still more widely scattered. Mr. W's. famous Mackay boar, now as well known in Massachusetts as the horse Black Hawk is in Vermont, or the Gifford Morgan in New Hampshire, was bred by Col. J. and by him sold to Mr. W. August 20th, 1834. He is, therefore, now nearly thirteen years old, though still as vigorous as ever. The four animals mentioned as now in Col. **Jaques'** possession, are of his get. His progeny, though but few of them are from sows of his blood, are very numerous—he having at various times traversed portions of the country, from Hadley, on Connecticut river, to Marshfield, on the sea-coast.

Col. **Jaques'** swine are from fifteen to sixteen months old. He offers to sell one of the boars at $50, and we really believe that his value to a pork-making neighborhood would be *ten times* that sum. There is no question that this Mackay stock possesses a remarkable tendency to fatten. We know this from our former experience with the breed, and our conclusions from this source are fully supported by observations during our late tour.

On the 5th of December, we saw four pigs of one litter, owned by Mr. **John Moore**, of Warren, Mass., which he stated were farrowed on the last day of Feburary, 1846. They were, therefore, when we saw them, nine months and five days old. It was estimated by butchers in the neighborhood, that their average dressed weight, if slaughtered at that time, would have been *four hundred pounds!* We have no hesitation in giving it as our opinion, that one of them would have overrun this weight at that time. We thought them the most wonderful pigs we had ever seen, both for weight, according to age, and weight, in proportion to bone. One of them was utterly unable to stand, or get upon his legs at all, and Mr. **Moore** was intending to kill him that day. Another, the largest of the four, could only with the greatest difficulty support himself on his legs, for a few minutes at a time. Mr. M. stated that these pigs were half Mackay, to which blood he attributed their remarkable tendency to fatten, they being, on the other side, of the common stock of the neighborhood. We expect to be furnished with the precise dressed weight of these pigs. It may be as well, however, to state, here, the manner in which they were fed; and, in so doing, we shall be under the necessity of adding a *cow story* to the story of the pigs.

Mr. **Moore** kept, last season, four cows. The product of these four cows for the season, (nine months,) was six hundred pounds of butter, which sold at twenty cents per pound, and thirteen hundred quarts of milk, which sold at four cents per quart. The four pigs above mentioned had the *skimmed milk*, from which the six hundred pounds of butter was made, and were, besides, fed eight dollars worth of grain (made into meal) each. He had engaged two of the pigs to go to Boston, at eight cents per pound, dead weight. It is very easy to see that Mr. M. had realized a pretty good income from his cows; the milk and butter, leaving the pork out of the account, gives to each cow forty-three dollars.

In the article in our November number, to which we have before alluded, we spoke also of the Suffolk breed of swine, some of which have been imported, by WILLIAM STICKNEY, Esq., of Boston. While in that vicinity, we went out with Mr. S. to his residence in Roxbury, where he keeps some of his swine. The specimens of this breed, which we had before seen, were mostly too young to justify a positive idea of what they might be when they had reached maturity. But we had now an opportunity of seeing, besides several pigs and young shoats, two barrows which were about sixteen months old, and were soon to be slaughtered; and though we had before formed a highly favorable opinion of the breed, we must acknowledge that their aptitude and capacity for acquiring fat, is even greater than we had supposed. The two barrows alluded to, are certainly extraordinary animals—possessing uncommon bulk and weight of carcass, with very little bone and offal. We shall probably receive an account of their dressed weights. We saw several persons who have had pigs of this breed from Mr. STICKNEY, and they invariably spoke of them in the highest terms as a *profitable* stock. They stated, that merely for fattening, it was better, on the score of economy, to pay six dollars a piece for the Suffolks, at six weeks old, than to buy the country stock at Brighton market, at the usual rates. In fact, after what we have seen and learned of them, we should not be disposed to doubt the statement of Mr. RHAM, author of the Dictionary of Agriculture, that "the Suffolk breed of pigs is, perhaps, on the whole, the most profitable of any in England."

At the State Lunatic Hospital, Worcester, and several farms in that neighborhood, we saw very good hogs which exhibited evident traces of Bedford and Mackay blood. At Mr. HENRY STRONG'S, Northampton, we saw five capital hogs, which would then have averaged five hundred pounds each, dressed. Mr. HORATIO SARGENT, of Springfield, has some very good hogs, a cross from Mr. WEBSTER'S Mackay boar with Berkshire sows.

CATTLE.—The cattle of Massachusetts were, no doubt, derived in the first place chiefly from England, though it is not unlikely that some were procured from Wales, and some from Ireland. As many of the first settlers emigrated from Devonshire, it is, with good reason, supposed that they brought with them the cattle of that district. In fact, it is thought by many, that the characteristics of the Devon breed *largely* predominate in most of the common, or what are called "native" cattle of the state. We are hardly prepared to assent to this position—we admit that the stock possesses traits in common with the Devons; but among the best of them, we think there are equally as strong indications of the Sussex blood. The proximity of the English county of Sussex to the coast, and its convenient access to vessels fitting out for America, renders it quite probable that this was one of the districts to which the New England colonists resorted for procuring their first domestic animals. We are not, however, aware that any authentic record exists of the early importations, and these remarks are only offered hypothetically.

But, within the last sixty years, importations have been made, at various times, of the Bakewell, or Dishley Long Horns, the Holstein, and Dutch Short Horns, various families and subvarieties of the English Short Horns, the Devons, the Herefords, the Ayrshire, and the Alderneys, besides one bull, at least, from Russia. Most of these have been introduced within the recollection of the writer, or the last thirty years, and the dates of many of the importations might be given. The blood of these different varieties has, of course, been mingled in a greater or less degree with the general stock of the state, and the several strains are frequently distinctly traceable in what is called the "native" breed. Yet there are a few neighborhoods, where the cattle have been for some time kept in a measure free from intermixture, and there they have considerably assimilated to an uniform character; though this character is not that of any English or foreign variety that we have ever seen described.

The oxen of Massachusetts, particularly those of Worcester, and some other counties, have long been celebrated for their fine appearance and excellence in the yoke; indeed, their performances are often a matter of surprise to persons unacquainted with the natural capabilities of the ox, and who have seldom witnessed the development of his powers under the exercise of proper skill in breeding, rearing, and management. The attention of a stranger is often attracted by the noble teams of oxen which are so frequently met with in the city of Boston and vicinity; and he seldom fails to notice their spirited and lively air, and the brisk and springy walk with which they move along their heavy loads. Most of these fine oxen are *educated*, if not bred in the county of Worcester. The towns of Sutton and Charlton, are especially distinguished for this description of stock. There are men here, with whom the breaking of steers, and disciplining and fattening them for sale, is made a profession. As great pains are taken in selecting and matching them, as to color, shape, weight, temper, &c., as skilful jockies bestow on their horses. Nor is scarcely less pains taken in their grooming. Their skins are kept clean, and their coats bright and smooth by the daily use of the curry-comb and brush; their long, tapering tails are neatly shaved or trimmed, leaving only a handsome tuft at the end; and their slender, gracefully-turned horns, ornamented at the tips with bright brass balls, are scraped and polished till they are almost as clear as if they had been wrought by the comb-maker. Red is the color mostly preferred, though some are brindled, and a few have a little mixture of white. Their training is commenced at a very early age, being frequently put under the yoke when not more than six months old. The object, however, is not to *work* them at this age; but only, by accustoming them to the necessary manœuvres, to gradually fit them for labor when they shall have acquired sufficient weight and strength. They are usually sold for the purpose of being put steadily to work at the age of four to five years, and the usual prices they bring are from $100 to $150 per pair, those of very extra quality sometimes fetching much higher prices.

Those who have attended the plowing-matches and other trials of working oxen in Massachusetts, have seen something of what these animals can do. In a fair competition at the plow, on soils of every description, they have seen them rivalling, and even surpassing the best horses, both for speed and quality of work. A single yoke is sufficient for turning a good furrow, in ordinary soil, and though the plowman is his own driver, such is their discipline, and the exactness of their movements, that they require but very little attention

The live weight of these oxen, from four to seven years old, when in ordinary working condition, may be rated at from thirty to thirty-six hundred pounds per pair. A few of them reach forty hundred. The medium sized ones are preferred as being in general more active and more hardy. When fattened, they weigh alive, from forty to forty-five hundred, and give proportionate dressed weights. Their beef is generally of good quality, and is well liked in Boston market.

It may be proper to say a word in regard to the manner of feeding working oxen. For common farm labor, it is seldom that anything more than hay or grass is required; though it should be remembered that the hay is of the best quality. When they are kept constantly at hard work, some more nutritious substance is given. Meal of Indian corn is most frequently resorted to, and it is thought that the best mode of using it is to mix it with chopped or cut hay. "Cob-meal," as it is called, or meal from the corn and cob ground together, is much approved. The quantity of meal given to each ox, varies according to the severity of the labor, from two to six quarts per day. [*To be continued.*]

RENOVATION OF THE POTATO—THE POTATO ROT.

Messrs. Editors—Among the premiums given by the State Agricultural Society the past year, were two for the best seedling potatoes, and the greatest variety of seedlings. Mr. N. S. Smith, of this city, received them both. As he is a near neighbor of mine, and I can speak from personal observation, I have his permission to give some account of his mode of culture and success.

He began four years since to plant seed from potato balls, and has every year planted not only the tubers from the improved seed, but the seed from the newly produced tubers. In the potatoes springing from the improved seed of each successive year, there has been a manifest improvement in size, quality, and quantity; so that this year I counted thirty-six sizeable table potatoes, that came from one hill, or rather from one seed, and all attached to one stock or vine. Many of these potatoes, growing from seed planted last spring, weighed from five to seven ounces each. The seedlings have the most fair and healthy appearance, with no signs of the prevailing disease, though they consist of many varieties. On two outer sides of his garden, all of which is of the same soil, exposure, &c., Mr. S. planted, the past year, some eight rows of common potatoes purchased in the market, consisting of pink-eyes, neshanocks, or mercers, and flesh colored; next to these, on two sides, he planted some twenty rows of different varieties of his improved kinds; and next to these he planted seeds taken from the balls last spring. These all had the same soil, culture, and attention. I should say here, that he first started the seeds in a hot bed, and afterwards set them out in a furrow about two feet apart,—one plant making a hill.

But mark the result when dug. Of the varieties first above named, many were badly diseased; the neshanocks most, the pink-eyes next, and the flesh-colored least. The improved varieties, growing by the side of these, showed scarcely any thing of the disease, and the seedlings none at all. At least, I have been unable to discover any up to this time, though I witnessed a considerable portion of the digging, and have examined very carefully among some twenty or thirty bushels.

A friend of mine in Niagara county, planted a large quantity of seed a few years since, and procured new potatoes sufficient to stock his farm and several others, but they were very small the first year, and the product, though vastly superior to the common varieties, did not wholly resist the rot. Mr. Smith's, on the contrary, by being improved from year to year, seem to have acquired such a hardy and perfectly healthy character in their renovated constitution, as to resist perfectly the disease, and to yield abundantly of large sized potatoes. Indeed, I often thought, as I witnessed the digging, that the hills of seedlings yielded more, on the average, than the common potatoes that had been planted with four pieces in a hill. Mr. S. intends to follow up his experiments with the potato, and is confident, that with the assistance of a boy, he can plant as much ground with potato plants in a day, as two men can with potatoes in the ordinary way. In this way he is confident, that however the rest of the world may fare, he shall have a supply of the very best potatoes, free from disease.

In view of the above and other considerations, I am induced to offer a few remarks:

1. *The potato has greatly degenerated*—it exhibits many symptoms of exhausted vitality. This is evident, not only *from the disease* so universally prevalent, but from the *small quantity produced in a hill*, for many years past. The remark has probably been made by farmers thousands of times within a few years, that potatoes do not yield half so much as they did twenty or thirty years ago, and the product is decreasing every year. Another evidence of their degeneracy is the fact, that they are beginning to be *very deficient in balls or seed*—many large patches and fields being found wholly without them. In Mr. Smith's garden not a ball could be found during the whole summer on any hill planted with common potatoes, while the vines of his renovated potatoes, and even the seedlings of last spring, were covered with balls. Another evidence still, is the *watery and insipid character* of those that escape the rot, compared with the potatoes that were grown twenty-five to thirty years ago. Those gifted with a vivid recollection, will not fail to perceive the contrast

2. It is believed that an *effectual remedy for the potato disease* is within the reach and application of every man. Mr. Smith's experiments show what it is, and how it is to be applied. Not that the seedling of one year or two will, in all cases, be sufficient to give the potato a perfectly healthy and hardy constitution; for like some diseases in the human constitution, that run in the blood to the third and fourth generation, sometimes, before they are perfectly eradicated, it may require the renovating process for three or four years. The main reason why the public has been faithless as to the success of this remedy, is, that the experiment has been tried only for one year. This not proving effectual, has led to discouragement and unbelief. Let the experiment of renovating potatoes on Mr. Smith's plan, be universally adopted and followed up for a series of years, and *if any thing can arrest and eradicate the disease*, this will do it. The general degeneracy shows that renovation is what it needs, and how can it be renovated except in the above way?

3. The *potato disease*, having been now for some years in operation, and ascertained to be nearly universal wherever potatoes have been cultivated, is evidently *not accidental*, arising from soil, climate, atmosphere, rain, or sunshine, but *constitutional*. Hence the remedy must correspond with the disease. And what can reach the case but a process of renovating, by planting seed? This process may be commenced and followed up by every farmer and gardener, and the result cannot fail to be beneficial. H. A. Parsons.

Remarks.—If it were true that the potato disease is wholly "constitutional," as our correspondent supposes, the vegetable would be equally effected in all locations, which is not the case. Even in England and Scotland, there are districts where the disease is not known, and where the crops have continued to be as good as ever, both as to quantity and quality. In the essay on this subject, written by Prof. J. P. Norton, (Transactions of the N. Y. State Agricultural Society, for 1845,) it is shown by answers given to queries propounded by the Agricultural Chemistry Association, that in five counties of Scotland the potatoe had not been effected by any disease. So in this country, we could name places where it has never suffered from the malady which in many locations has destroyed the crop. Again, it is not those varieties, as this theory would seem to imply, which have been longest propagated from the tuber, that are most effected. Take, for instance, the long reds or merinos, which were introduced here some forty or fifty years since, from the river La Plata, South America, and which had been there previously cultivated for an unknown period: they are more generally productive and free from disease than any other kind within our knowledge. While, on the other hand, the Neshanocks or Mercers, the Carters, and some other kinds, known to have been produced in this country within a comparatively few years, are the most weak in constitution and most subject to disease.

We regard the production of potatoes from the ball, as similar to the production of apples or other fruit from the seed, and we should no more expect a "renovation" in one case than another. The scion or bud, also, answers to the tuber, and if it can be proved that varieties of fruit degenerate from being propagated by grafting or budding, we should regard it as evidence that the potato might be affected in the way indicated.

But that an advantage may accrue from raising both fruit and potatoes from seed, we readily admit. We do not, however, regard it as a means of renovating species; but as a means of multiplying varieties, and thus affording opportunities for obtaining superior ones by selection. It is the only way in which superior kinds can be obtained. Each kind has its peculiar natural habit, and when it has become fully developed, we are able to judge whether the propagation of the kind would be advantageous or otherwise. Of the almost infinite number of apples which have been produced, a few only, comparatively, have been worthy of cultivation; and the chance of obtaining from seed a superior sort, is, perhaps, as one to a hundred. Our experience teaches that it is so with the potatoe. We have at various times raised from seed many kinds, and from the number have procured a few really superior ones; while the remainder and larger portion, had no properties which rendered them particularly valuable.

In our number for November last, we cited an instance of potatoes having been produced from seed, during the past season, under our own observation. Of the six or seven kinds there spoken of, nearly all were evidently effected by the "potatoe disease," at the same time that most other potatoes in the neighborhood were attacked. One or two kinds appeared to have more natural stamina than the others, and continued vigorous till the close of the season. They may, on further trial, prove valuable.

It should be remarked, that the practice of continuing to plant seed from only the *best kinds* of fruits or vegetables, for several generations, may reasonably be expected to produce greater improvement than if no care was exercised in this respect.—Eds.

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Seneca County, N. Y.—Extract of a letter from John Johnston, Esq., to the Cultivator:

"I am sorry to say our potatoes are rotting very fast; mine were perfectly sound when I gathered, and yet I am afraid I shall not save any for seed. More than one-half are now rotten, and rotting daily."

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Chester County, Pa.—Extract of a letter from Dr. A. Bush, to the Editors of the Cultivator—"The potato rot prevailed to some extent in this county. In some instances, the quantity raised has not equalled the amount of seed. In all cases the crop is light; my own not excepted. The season has been exceedingly rainy and hot, with frequent flooding showers, predisposing potatoes to rot in the highest degree, and continuing so throughout June, July, and August. About the 16th of July symptoms of the rot appeared in my potatoes, but was confined to flat and clayey spots, where the excess of water could not readily run off. The tubers in such situations became diseased, whilst the tops looked healthy, and from continued and careful observation, I am confirmed in the views I expressed in the essay, published in the Transactions of the N. Y. State Ag. Society, respecting the nature of the disease. I have not observed that any variety is less subject to the rot than the Philadelphia Mercers, of which I had planted about eighty bushels, and harvested about 300."

CULTIVATION OF SWEDISH TURNEPS.

[We have been furnished with the following letter in reply to a request from the Hon. A. Stevenson, of Virginia, for information in relation to the culture of the Swedish turnep, or Rutu-baga.—Eds.]

Albany, Dec. 15, 1846.

Hon. A. Stevenson—*Dear Sir*—It is with much pleasure I answer your inquiries on the cultivation of the Sweedish turnep. I regret my inability of description; but shall be happy to disclose to you my mode of culture by which I usually obtain success.

I regard the turnep crop as one of the most important to the English farmer, and believe it to be equally as productive here as in Britain, under the same careful culture.

In England, the turnep is the renovator, and the farmer's best friend; light soils would be utterly useless, and impoverished, were they not aided by this valuable root. England has the advantage over America, as to climate, which will there admit of turneps being fed off on the land, and the treading of the sheep in winter is a very great advantage to a porous soil, which is peculiarly adapted to the bulbous tribe of vegetables. Turneps can be grown to advantage on any kind of soil, except a stiff clay; in such a soil the roots cannot penetrate, the fibres cannot search for food to feed the plant, unless the soil is kept soft by continual moisture; but sand, gravel, loam, or stony soil, are best adapted to turneps, and are the most kind and grateful to them. My mode in this country, by which I have been remarkably successful, is as follows:—

The first crop of eight acres I sowed on the river flats, a stiff loam, which was yearly overflown in the spring. I could not prepare the land according to the system I pursued in England previous to sowing. I could only plow it once, before the manure was put on, and then plowed it in. The weeds sprang up with the plants, and it required an immense amount of labor to keep them from choking them. Notwithstanding this, I kept the weeds down sufficiently to keep the turneps above them, and they flourished beyond my expectations. The compost I applied was so *agreeable to their taste,* that they fed upon it, and thrived exceedingly. It was a mixture of barn-yard manure, the refuse of slaughter-yards where thousands of cattle had been slaughtered, drawn into a mine or pile in the winter, and all turned over, and mixed well together in the latter end of March. Give me such compost as this, so far decayed as to cut out with a shovel, and I shall never fear of obtaining a crop, unless the season is excessively dry. Such a composition very soon dissolves, and forces the plant in its early stage out of the way of the fly.

This crop was sown broad-cast at four different periods; the first, the early part of June, (say the first week;) the second, ten days later, and so continued until the whole crop was sown. The object of the different sowings, was to take advantage in hoeing; as soon as the first was finished, the second was ready to commence, and when the last hoeing was completed, the first needed a second hoeing; and when at the end again, they were safe from the weeds, and required nothing more doing to, until pulled and put into the cellar.

I cut the tops as I pulled them, and drew them into the poorest part of the pastures; the cattle eat them with avidity, and left their manure in the place it was wanted. This crop, as near as I could "*guess,*" averaged about twenty tons to the acre. The second crop was on a similar soil about the same number of acres, and one-half of it under different treatment. Part of this lot was what is here called *old meadow,* but it was a complete mass of couch grass. I had some breast-plows made, pared off the sod and burnt it, and the quantity of ashes exceeded any thing I ever saw in England, under the process of "*paring and burning,*" so generally practiced there for a turnep crop. The ashes were all the manure applied, and although sown later than those to which the compost was applied, did not incur one quarter of the expense in hoeing, the weeds having been previously destroyed by burning. The crop was equally as good as the former. I drew these tops on the pastures as before. I "*guessed,*" this crop as averaging twenty-five tons per acre. The third crop was a field of about twelve acres, of old pasture, and like the previous one, a bed of couch-grass. Part of this field was a dark sand, and the other part a lighter sand, either of them an excellent soil for turneps. The whole of this field was breast-plowed, and produced only about half as many ashes as the former one, therefore, I added a slight dressing of compost; and although a very dry season, I should say the average was certainly twenty-five tons to the acre. If the season had been favorable, the weight of produce would have been most extraordinary. In August and September, the leaves were all dried up and withered. A heavy rain came early in October, and they grew with exceeding rapidity; if they had had six weeks more to have grown in, as they would have done in England, they would have surpassed any crop I ever saw grow there. The fourth crop was a similar soil to the latter, but had been miserably impoverished; the previous crop was a mixture of Canada thistles, weeds, and a *small* portion of barley, not sufficient to pay the expense of harvesting. To this crop was applied the same quantity of compost as the first crop. The dry weather in August and September very much affected their growth, the tops became mildewed, but I think they were equal to any previous crop, and would have compared with the best crops in England. They generally grow there until Christmas, and sometimes the middle of January. I should say that your climate in Virginia possesses advantages in this respect over a northern clime; and I am strongly inclined to believe, they would stand the frost the whole of the winter; if so, the tops in the spring will produce you very early food for ewes and lambs, and enable you to send early lambs to market.

These statements of crops, are somewhat like "*guess works*" as respects the weight per acre. I judged from the number of loads drawn, having weighed a bushel basket full, and measured the wagon box with the basket. This gave me the impression at the time of the amount of produce.

The true way to grow Sweedes is this. Plow your land as soon as the grain-crop is off; then all the pernicious seeds exposed to the atmosphere will vegetate. Let them grow for a month, then plow again, and turn them under; the seeds on the surface will again spring up, and the winter will destroy them. The more you stir your land, so much the more you make your weeds grow, by bringing those seeds that have been lying dormant, to the surface, which when once sprouted are thus destroyed, leaving your land free from refuse and weeds, to receive the crop you intend to grow upon it, and which saves you more than half in hoeing.

By a continuation of this system, and sowing clear seed grain, you keep your land free from weeds, which I consider a very prominent item, not only in the expense of labor, but in the unprofitable exhaustion of the soil. By letting your various kinds of manure decay in the compost heap, and mixing them well together, you destroy all injurious weeds therein contained, and you get a greater benefit from it in the early part of the season, when the plants require forcing to shade the ground with their leaves.

My object in sowing broad-cast, is to put enough seed on the ground, so that the fly may feed on a part of them and then leave enough for a crop. A man who understands hoeing turneps broad-cast, can do as much in a day as he can in the drill. and I never want to see a horse amongst them. If the land is well pulverised, and reasonably free from weeds, a man can hoe the first time, half an acre per day. The second time he can do more, but to effect this he must do it while the plants and weeds are young; the sooner after the second rough leaf appears, the better.

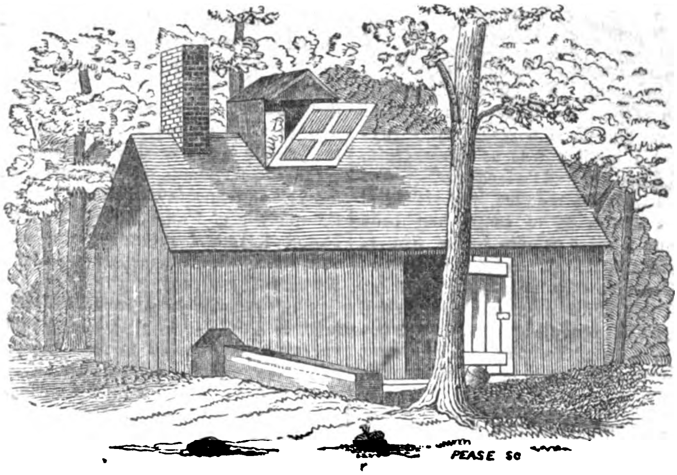
There are but very few good turnep hoers; most men are afraid to exercise their hoe freely, leaving them much too thick, and do not bear sufficiently hard upon it to go to the bottom of the roots of the weeds, which take root again and grow as rapidly as ever. I generally leave them from eighteen inches to two feet apart, and think I can obtain a greater weight by the latter space than the former. Great care must be taken to leave the plants singly. An experienced hoer will seldom have to put his hand to a plant unless they are very thick; they are principally drawn by the corner of the hoe made for that purpose.

I put the roots in a long cellar, the whole length of the stable, about fifteen feet wide, ninety feet long, and ten feet high, putting a slight covering of straw on the top. In this way they have kept well the whole of the winter, and until the middle of May, sometimes sprouting in midwinter. I cut them for my young stock, and feed them whole to those whose teeth are well settled; about a half a bushel per day to the latter, and less to the former.

I am, dear sir your, ob't servant,

W. H. Sotham.

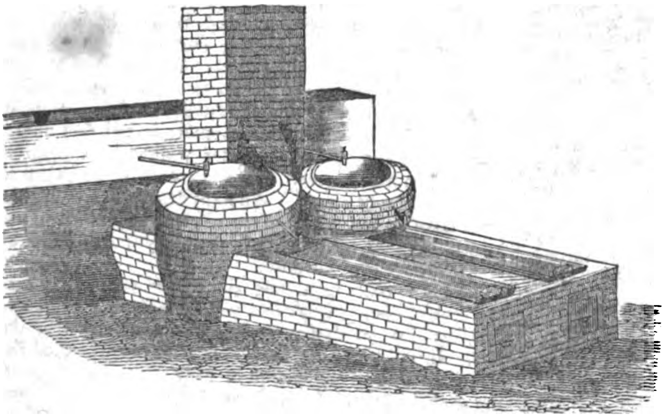
Great Corn Stalk.—M. B. Bateham, of the Ohio Cultivator, has received a cornstalk from Kentucky, which is 7½ inches in circumference, (2½ inches, diameter,) 19 feet high and 12 feet to the ear.



MANUFACTURE OF MAPLE SUGAR.

The manufacture of maple sugar is a very important business to some of the northern states, and if proper attention were devoted to it, might undoubtedly be rendered much more valuable. We have no means of ascertaining the precise amount annually produced in the Union, but according to the estimate of the Commissioner of Patents for the year 1841, the following states produced quantities as herewith affixed, nearly all of which was probably from the maple:

Maine,.......	663,592 lbs.	Maryland, ..	39,892 lbs.
N. Hampshire,	169,515 "	Virginia,...	1,557,206 "
Massachusetts,	496,341 "	Kentucky,..	1,409,172 "
Rhode Island,.	55 "	Ohio,......	7,109,423 "
Connecticut,..	56,372 "	Indiana,....	3,914,184 "
Vermont, ...	5,119,264 "	Illinois, ...	415,756 "
New-York,.	11,102,070 "	Missouri,...	327,165 "
New-Jersey,..	67 "	Michigan,..	1,894,372 "
Pennsylvania,	2,894,016 "	Wiskonsan,.	147,816 "
Iowa,................	51,425 lbs.		



Sugar Boiling Apparatus.—(Fig. 8.)

When in Vermont in 1845, we saw some specimens of maple sugar of a quality much superior to what is generally met with, and were quite interested to learn the process by which it was manufactured. At our request, we have been furnished by Mr. **Lyman Hall**, of Shelburne, Vt., with drawings and a description of his apparatus for making maple sugar. Above we give a view of the building which contains the fixtures, and in which all the operations are performed. Fig. 8 represents the apparatus for holding and boiling the syrup. The arch of brick-work is five feet six inches broad, and nine feet long to the back of the chimney. In front of this arch, will be seen two sheet-iron pans, each four feet long and twenty-one inches wide. Directly in the rear of each of these pans, is a caldron, connected with the former by means of a tube and stop-cock.

In the rear of the whole, is a large reservoir, or trough, capable of holding nearly eight barrels, being connected with the kettles in the same manner as the kettles with the pans, and in the rear of this, another of the same dimensions, in both of which the sap is deposited. When the "works" are in operation, a constant stream is running from the reservoir into the kettles, where the sap becomes heated, and is then passed into the pans by a constant stream, and is there reduced to a capacity for sugaring. The syrup is then removed, and is sugared in another department.

Considerable care should be taken in setting the pans and kettles, in order to save all the heat. The space under the pans is as wide, and no wider than the bottom. At the farther end, the flue rises six inches, in order to throw the heat against the bottom of the pans. About four inches above the bottom of this elevated flue, the bottoms of the kettles are set, the arch being headed up to the kettle, making the flue about ten inches deep; then from the rear, the flue passes in a horizontal direction quite round the kettle, and leads into the chimney. It will be found expedient to keep the flues separate, some five or six feet in the chimney. The building is ventilated at the top by a door which is managed by means of a pulley.

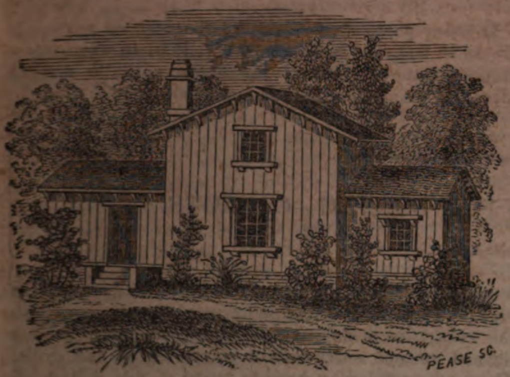
Mr. **Hall** made 1,200 lbs. of excellent sugar in 1845, and Mr. **Henry S. Morse**, a neighbor of Mr. H.'s, made 1,000 lbs. It would have readidily commanded 10 cents per pound by the quantity..

Maple sugar may be produced of a quality not inferior to the best double-refined cane sugar. Mr. **Joel Woodworth**, of Watertown, N. Y., has several times taken the highest premiums of the State Agricultural Society, and the article produced by him is superior to any other of the kind we have ever seen. The committee who awarded Mr. W. the premium in 1844, in their report, say—"We have never seen anything of the kind at all comparable with this, either in the perfection of the granulation, or the extent to which the refining process has been carried. The whole coloring matter has been extracted, and the peculiar flavor of maple sugar is completely eradicated, leaving the sugar fully equal to the best *double* refined cane sugar to be found in our markets."

As Mr. Woodworth's statement in regard to the mode of making and clarifying his sugar may be useful to others, we give the substance of it herewith:

"In the first place, I make my buckets, tubs, and kettles, all perfectly clean. I boil the sap in a potash kettle, set in an arch, in such a manner that the edge of the kettle is defended all round from the fire. I boil through the day, taking care not to leave anything in the kettle that will give color to the sap, and to keep it well skimmed; at night I leave fire enough under the kettle to boil the sap nearly or quite to syrup by the next morning. I then take it out of the kettle, and strain it through a flannel cloth into a tub, if it is sweet enough; if not, I put it in a caldron, which I have hung on a pole in such a manner as to be taken off and on at pleasure, and boil it till it is sweet enough, and then strain it into the tub and let it stand till the next morning; I then take it and the syrup in the kettle and put it all together in the caldron, and sugar it off. I use to clarify, say 100 lbs. of sugar, the whites of five or six eggs, well beaten, about one quart of new milk, and a spoonful of saleratus, all well mixed with the syrup before it is scalding hot. I then make and keep a moderate fire directly under the caldron until the scum is all raised; then skim it off clean, taking care not to let it boil so as to rise in the kettle before I have done skimming it. I then sugar it off, leaving it so damp that it will drain a little. I let it remain in the kettle until it is well granulated. I then put it into boxes, made smallest at the bottom, that will hold from 50 to 70 lbs., having a thin piece of board fitted in two or three inches above the bottom, which is bored full of small holes to let the molasses drain through, which I keep drawn off by a tap through the bottom. I put on the top of the sugar in the box two or three thicknesses of damp cloth, and over that a cover, well fitted in, so as to exclude the air from the sugar. After it has done or very nearly done draining, I dissolve it, and sugar it off again, going through the same process in clarifying and draining as before."

PLAN OF A LABORER'S COTTAGE.



Elevation—Fig. 8.

The constant drudgery and fatigue of boarding half a dozen hired men, is too well known to most housewives. This is indeed regarded by a large portion of country residents, as the chief drawback on the enjoyment of the farmer's life. This labor may be much diminished by the erection of a good, pleasant, and substantial laborer's cottage, and the employment of married men, of sober and steady habits, who obtain their meals at their own houses. Having formerly had occasion to erect a small house for this purpose, we have concluded that a description, with figures, would be acceptable and useful to some of our readers, as it has been found simple, cheap, and not bad-looking.

It is built by nailing the plank used for the exterior covering on the frame, in an upright position, and then covering the joints with strips about two and a half inches wide. Similar strips are nailed on the joints inside, and these receive the lathing. These two sets of strips, if well nailed on, render each joint sufficiently tight in such a house without matching, or grooving and tonguing the edges. The outside surface being left rough for the reception of successive coats of whitewash, entirely obviates the expense of planing, and hence a less costly kind of material may be used. The color of the whitewash may be softened by a proper admixture of red and yellow ochre, and a little lampblack. The only parts outside, needing paint, are the window and door frames, and doors. A repetition of the whitewashing once a year, for the first two or three years, and less frequently afterwards, will maintain its good appearance. A coat of paint on the rough surface, will be more durable than if applied to one rendered smooth by the plane.

The annexed figure will show the internal arrangement. A cellar is situated under the kitchen; and a spacious chamber over the principal room, may be divided into two small bed-rooms. The kitchen ceiling is lathed on the rafters,—the chimney is built on the floor of the chamber in the principal part, so that the pipe from the cook stove passes horizontally into it. The pipe from the stove in the principal room, passes through the floor above into the same chimney. The floors for the kitchen and chamber, are made of rough boards.

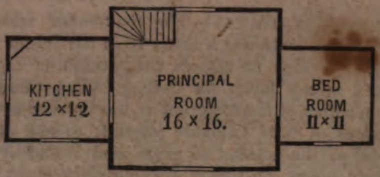
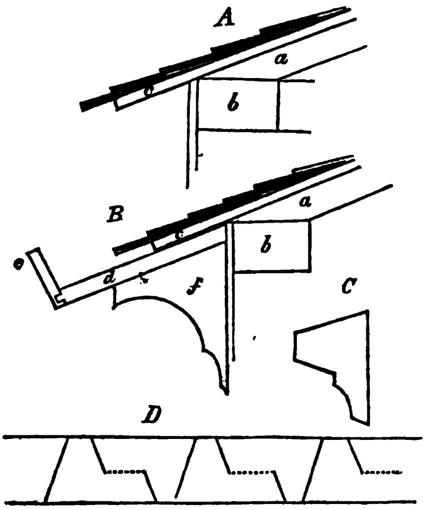


Fig. 9.

The mode of constructing the eave troughs is shown in fig. 10, and they are found cheap and good. *A.* represents the eaves simply, *a* being the lower end of the rafter, resting on the plate *b*, supporting the edge of the roof-board *c*, which projects about eight inches. *B* exhibits the same with the eave-trough attached; which is done by placing a sound and durable inch-and-a-half plank, *d*, directly under the roof-board, and projecting several inches beyond it, supported by the



Eave Troughs.—Fig. 10.

brackets, *f*. The strip *e*, is added by matching, forming the trough. A coat of good paint completes it. A lining of tin-plate, or zinc, would be more substantial. *D*, shows the mode in which the two inch plank, for brackets, is cut up without waste. The cross lines are for the saw, the dotted lines where the wood is separated by splitting. *C*, is a finished bracket

The advantages of this plan are,—considerable room is afforded at a very cheap rate, the whole house, when completely finished, not costing $200; the heavy timber frame is obviated, as the two wings, being small, may have a frame of scantling four inches square, and the central part seven inches square. Studs are not needed. The wings and central parts serve as supports to each other. The outside being coated with colored whitewash, which is quite cheap, the usual objection to an extended outside surface, is removed. The carpenter work is very small.

As many farmers will be controlled in the erection of such houses by the cost, we give below the bill of expense, which they may easily alter to suit prices in different places.

8 sticks of timber, 16 feet long, 4 cts. per foot running measure,	$5.12
300 ft. scantling for braces and rafters,	2.25
300 ft. joists,	2.25
200 ft. scantling for frame of wings,	1.50
600 ft. roof boards,	4.50
700 ft. surface, shingles,	17.50
950 ft. flooring,	9.50
1800 ft. 1¼ inch plank, for siding, all 10 in. wide,	18.00
800 ft. strips for joints, one-half straight, clear, and handsome,	8.00
1200 ft. lath boards, for three lower rooms,	7.00
400 ft. plank for windows, doors, &c.,	6.00
Sash and glazing,	8.00
Nails and door trimmings,	7.00
Cellar wall, mason work, digging, materials,	20.00
Lathing, plastering, lime, sand, labor,	12.00
Painting window frames, doors, &c.,	8.00
Brick and chimney,	3.00
Carpenter work,	30.00
Contingencies,	9.88
	$180.00

In many parts of the country, the cost of materials would be less, and in others more, than in the preceding estimate—in case of the house actually erected after this plan, the cost was not $150. T

CULTURE OF GREEN CROPS FOR SOILING—CARROTS.

EDITORS CULTIVATOR—The September number of the Cultivator contained a letter from our friend W. H. SOTHAM, in which he notices the rotation of crops, as cultivated on my farm, for *Soiling Milch Cows*. His favorable notice of my experiment, has induced several of the readers of your valuable journal, to ask of me a statement of the amount of *green* food raised by me on the *twenty* acres, on which I soiled *sixty* cows, for six months. To save time, permit me to trouble you with the following statement for publication in your paper. The whole product averaged more than 12 tons of green food per acre, as you will see by the following table.

5 acres of clover, cut three times,	57 tons.
5 acres of oats, cut twice,	41 "
5 acres of corn, cut twice,	84 "
5 acres of corn and pumpkins once,	73 "
20 acres in all,	255 tons.

The Corn on one acre, (black muck, manured with cow dung, leached ashes and lime,) yielded stalks over *ten* feet long, planted in drills one foot apart, and *four* inches apart in the drills, and weighed over *twenty tons* of *green* fodder to the acre.

The Carrots noticed by Mr. Sotham, yielded on the average six hundred bushels to the acre, and on some portions of the muck soil, (manured with cow manure and leached ashes,) they were in many instances fourteen and fifteen inches in circumference, and twenty-seven and thirty inches long, and produced at the rate of twelve hundred bushels to the acre, in beds of one quarter acre each. They were drilled in by machine, (as was also the *corn*.) in drills one foot apart, and the Carrots thinned to one every four or six inches in the drills. They were weeded by hand at a cost of five dollars an acre, for three times weeding, and pulled and topped for *two cents* a bushel ready for cellar. Being in muck land they pulled easy; thirty bushels was about a days work for each of the laborers, who were mostly German women. My Carrot crop cost me this year, five dollars an acre for plowing and preparing the land, five dollars for weeding, four dollars for seeding, (including the seed,) twelve dollars for pulling and covering, and four dollars for interest on land, making *thirty dollars* an acre or on an average *five cents a bushel for the Carrots*, they being worth in the Rochester market, twenty cents a bushel by the quantity, and retail at twenty-five cents, at which latter price I should clear one hundred and twenty dollars per acre, on my whole crop of eight acres. Is not this a valuable crop? My last years crop of four acres, yielded me six hundred and forty bushels per acre. I intend next year to sow at least *ten* acres of Carrots, and *two* acres of Sugar Beets for my cows. Would it be of any interest to you to know how I cultivate them? If so I will tell you next month. I shall always be happy to answer all inquiries. Yours, C. B. STUART.

Rochester, December 4, 1846.

We should be glad to receive an account of Mr. STUART's mode of cultivating carrots and beets.—EDS.

MANAGEMENT IN FARMING.

THE present is a very appropriate season for a review of the past operations of the farm, and devising plans for the future. Every one who, has not yet reached the highest summit of agricultural skill and perfection, will, doubtless, wish to make continual advances towards that desirable accomplishment, and the direction of the attention of such to some points in practice, may possibly be of value.

The great secret of success in all kinds of business—the reason why one man becomes rich, while another remains poor—is, *management*. A great deal is said of the importance of *capital* to begin with, and it is indeed a very great convenience. We know many young farmers who utter frequent regrets that they have not as fair a start as some others—they could, as they think, do wonders if they had plenty of means as a beginning. But regrets do not make money. Every one knows, that he who does not reap large profits from a liberal capital furnished him, must be a poor manager indeed. The man who has a hundred acres of land, with one thousand dollars as additional capital, may farm much more satisfactorily than he who has the same amount of land encumbered with a thousand dollars debt. He is two thousand better off, and would be much the worse manager of the two, if his profits from the same land were not decidedly the greatest. That man shows his skill pre-eminently, who, instead of repining at difficulties, surmounts them; who, by superior management, keeps pace with his *longer-pursed* neighbor.

"But," say some, when they hear of an improved mode of farming, "we know this is the best practice, but the fact is, we cannot pursue it—we have not the means, and we cannot get it—we are not rich enough to be thus economical." Now, we hope such persons will permit us to say, that this conclusion proceeds from a want of information. A certain young farmer's expenditures are three hundred dollars yearly; and after the most rigid economy in every particular, so that a single dollar could not be retrenched, he saves nothing. Another young farmer, with the same means precisely, and with equal economy, saves two hundred yearly. What is the reason of this difference? What the secret of the better success of the latter? The answer is—*a better application* of the same means.—or in other words, better *management*. Hence, the vast importance of understanding the best application of means.

We will venture to suggest a few of the particulars in which we think many of our farmers might make more or less improvement—some of them very decidedly so.

One of the first of these is, a neat and judicious *laying out* of their farms,—for economy in fencing; for convenience of access to all their fields; and in such a manner, that each crop may occupy as nearly as possible its own field, so as to admit of a good system of rotation. Hence, the lane or farm-road should be good, hard, and level, to admit of easy cartage of manure and crops, to and from all the fields. Hence, too, if the land varies in quality, that of similar character must be as nearly as practicable in the same enclosure, so that meadow and pasture may comprise the wet, and arable land the dry, and the most sterile may be brought, separately, into an enriching course. A farm so laid out, that cattle may obtain water of themselves, may save whole weeks of labor in driving them to water, &c., every year. Indeed, the saving of labor by a well laid out farm, can hardly be estimated in the multifarious operations constantly taking place.

A careful saving, manufacture, and good application of *manure*, would promote a great improvement with many. Much of the value of the products of the barnyard are lost from want of a good supply of straw, dried muck or peat, to absorb the liquid portions. Much is lost by its wrong application, and especially by the want of its thorough admixture with the soil by repeated plowings and harrowings. From our own personal observations, we are perfectly satisfied, that the benefits from manure might be very easily tripled on nine-tenths of the farms of the northern states. We do not mean here to include, at all, those who suffer their manure to remain in the yard five years, till nine-tenths is lost by fermentation and vapor; nor those who do not apply it at all; nor the man who built his hog-pen across a stream, that the cleanings might be conveniently shoveled into the water and washed away. Manure may be even well applied, and well mixed with the soil, and then wasted by an exhausting course.

A careful, constant, and vigorous attention to weeds, would work wonders on some farms. There are two modes of disposing of these costly intruders;—one, is to destroy them thoroughly when only an inch high, when the work may be very easily and effectually done, and before the soil and crop have been injured by their growth; and the other, is to allow them to get a foot high, thus doing great damage, and then to make an assault upon them at an enormous expense. "O, but we did not intend to have suffered the weeds to get so large, but we were backward in our work, and were disappointed in our hired help." But you must remember that good management causes a man to take time by the forelock—or, to speak more strongly and roughly, to take him by the snout;—and you must endeavor to secure such help as will not disappoint you. Many farmers err by attempting to do a great deal with a little help; the consequence is, every thing is hurried, and every thing behind-hand,—and then more help must be ultimately hired, or the work neglected at still greater loss. Would it not be cheaper to hoe an acre of carrots with three days' work, while the weeds are as yet no longer than small feathers, than to hoe them with ten days' work, when the weeds have attained a growth of two tons to the acre? It would be cheaper to hire a man in time, at double price, and pay him with borrowed money at eighty per cent interest, than to permit the delay—though neither are necessary.

We need not here go into a minute examination of all the various items of good and bad management, which have been elsewhere fully treated of; but we may merely recall a few things to remembrance. The loss of hay and other food of sheep and cattle, by their exposure in open fields to cold winds in winter, causing a consumption of nearly double the amount needed for them in warm places, would, in a single season, be enough to erect good and cheap shelters, to say nothing of the improved condition of the animals, and security from loss by death. A great saving would often result by taking pains to select fine animals to breed from. A fine and handsome animal is as easily raised as a bad and ugly one, and frequently commands a double price in market. A similar advantage would result from selection of seed. Many days labor may be annually avoided, by procuring the very best tools, where they are such as are much in use. A vast amount of valuable time, and some fretting, may be saved by having a place for everything and everything in its place, and habits of leaving things out of order, which are very hard to conquer, and which, like all kinds of carelessness, are the bane of fine farming, be prevented. And it is of vital consequence, that everything be done at the right season. A few days delay, not unfrequently results in great losses; sometimes the entire *profits* of crops, or their amount over and above their cost of raising, are destroyed by planting out of season. To prevent confusion and embarrassment, every thing should be before the eye of the farmer at once, that nothing may be neglected; and those who can think of but one thing at a time should have a memorandum book, constantly in the pocket, for noting down and for reference to at all times, every thing, small and great, important and unimportant.

It is by attention to these things, and many others, that some farmers are enabled to obtain large profits from their farms; while others, on equally good land, as great in extent, and with as much capital as a beginning, make but a scanty living, and obtain no surplus revenues with all their industry and frugality. T.

THE ORCHARD AND THE FRUIT GARDEN.

GRAFTING THE PEAR ON THE APPLE.

T. S. **Humrickhouse**, of Coshocton, Ohio, in a communication published in Hovey's Magazine, gives a minute account of the results of his experiments in root-grafting the pear on the apple. As frequent inquiries are made by the cultivators of fruit, as to the success of this practice, in consequence of the difficulty of procuring pear stocks, we believe a brief abstract of these experiments may be useful.

The first trial was made in 1838, by only eight grafts, one-half of which grew the first season, but died the second and third.

Seventy-six were grafted in 1839, about one-half of which grew the first season, but nearly all of them subsequently died, or became very much stunted in growth. None appeared to have made roots of their own.

Forty-eight were grafted in 1840. Twelve grew. Among these, two out of five of the Passe Colmar, grew, and after remaining stationary, or nearly so, for three years, threw out roots of their own, on which they have become established and thrifty trees, the apple root having rotted entirely away. Out of four of the Capiaumont, and three of the Urbaniste, only one of each grew, which now appear to be throwing out roots of their own, and are becoming thrifty, after having, for several years remained stationary. Out of five Bezi Vaets, one has thrown out its own roots, and become thrifty. Two out of four Bartletts grew and flourished, without being dwarfed at all. They have both borne; on one the only fruit was small and deficient in flavor; the dozen or more, "of fine appearance," on the other tree, were all stolen by boys, before examined.

In 1841, fifty-nine were grafted, about one-half of which either failed or came to nothing; the remaining half, of the Seckel, about three-fourths grew, one-half of which have become thrifty.

One hundred and seventeen were grafted in 1842. About one-third grew; most of these appear to have done but poorly.

In 1843, seventy-two of the Bartlett and Easter Beurre were grafted, about one-half of which grew, and a number are thrifty. In all the experiments, these, with the Seckel, appear to have done best. Of several other varieties, the grafts were entire failures.

On the whole, it will be perceived that only a very small portion have proved to be good trees, and in some seasons, none of them. The apple roots selected were one-half to three-quarters of an inch, and some an inch in diameter, two years old, and they consequently must have been quite thrifty. We have seen many hundreds of the pear grafted on apple roots, not one-half of which grew; and among all which did grow, not one has become a thrifty tree, but they have remained nearly stationary for several years, gradually decreasing in number by successive deaths.

From the preceding experiments we may infer, that by selecting the largest and thriftiest stocks, and a few particular varieties, in the most favorable seasons, and in the very best soils, partial success may be expected; but, under ordinary circumstances, the prospect of succeeding with any is so small, as to render the practice not one to be recommended. We have seen in some of the English periodicals, directions for encouraging the emission of roots at the point of junction of pear grafts on apple stocks, by making small slits with narrow gouges; but further information, as to success usually attendant, was not given.

We have known some varieties of the pear, and especially the Summer Bon Chretien, to be grafted on large apple trees, at standard height, with good success. It happened only in some seasons that the fruit was sensibly altered from its usual character. In one of the experiments already spoken of, one of the Seckel grafts on an apple root which bore, yielded fruit of double the usual size, of a pale green color, of excellent flavor, perfectly melting, and without any grittiness whatever The fact that dissimilar stocks often change considerably the size and quality of pears is well known; and it becomes a very interesting subject of inquiry for nurserymen, amateurs, and the raisers of fruit for market, whether an advantage might not result in some cases. by the employment of apple stocks for pears. to be grafted on large trees at standard height. If, for instance, the Seckel, the richest of all pears, but diminished in value by its very small size and very slow growth, could be doubled in size, and the trees soon made productive, by grafting on large apple trees, without lessening its delicious qualities, it would be a most valuable discovery. The result just stated, on the authority of T. S. **Humrickhouse**, and which he says is corroborated by the statement of A. H. **Ernst**, an eminent nurseryman at Cincinnati, indicates the strong probability that such a result may be looked for in some cases. Is not this suggestion well worthy of trial? Those who have large apple trees can easily make the experiment—and if it should happen to fail, the loss will be very small, and the trees remain, but little injured. T.

FRUIT CULTURE ON MARTHA'S VINEYARD.

Messrs. Editors—It is over twenty years since I began to take a Horticultural publication. Your excellent paper (The Cultivator,) is received. and perused with much pleasure. The knowledge I have obtained. is worth ten times the cost of the paper. In fact, the perusal of them, has caused an entire revolution in my mind. Twenty years ago, I did not think I should ever take the pleasure I now do, in cultivating a small garden.

From my earliest recollection, it was said, "there is so much salt in the atmosphere, it is impossible to raise good fruit on this Island." There were some orchards on this Island, but the fruit was small and knotty. Many of the farmers had got almost discouraged. I examined some of the orchards, and concluded that the bad fruit was the result of bad culture, or rather, no culture at all.

Fourteen years ago, I set out a few apple, pear, quince, cherry, and plum trees, grape vines, &c. I have never seen better fruit in Boston or New-York markets, than I now raise. Our people are now convinced that good fruit can be raised, and they begin to show their faith by their works. Last year, the inhabitants bought about $700 worth of trees. I do not think that one-half that sum was ever before expended for fruit trees, since the white man first came here.

It has been said, that Newtown pippins would not do well so far North. I have but one tree of pippins; last summer that tree bore the largest and handsomest fruit by far, that ever I saw.

For fourteen years, I tried to raise peaches, but the few I raised were miserable, and I had become almost discouraged. In the spring of 1844, I selected three trees, and put about a peck of fine charcoal around each. It was a benefit, but not so great as in the following years. In 1845, they bore some good fruit. In 1846, the three trees bore a tolerable crop of excellent peaches. Those around which there was no charcoal, bore no good fruit, and if nothing is done to prevent it, will soon die.

For ten or eleven years, my grape vines were pruned sparingly. My grapes moulded, they were small, they ripened late, and but few were fit to put on the table. Three or four years ago, I bought Hoar's treatise on the cultivation of the grape. I pruned according to his direction. I can now raise excellent grapes, free from mould, (or mildew;) they ripen early, and are as good as heart can wish.

The reason why our vines require so much more pruning than yours, is because the climate differs so widely from yours. We are 90 miles south from Boston, yet we find it eleven degrees colder here in the summer, than it is in Boston. In order to satisfy some of my neighbors, I left four vines without pruning, on each side of the four I pruned close. On the four vines there was not one bunch well filled. On each side, the grapes were excellent. Here, and to the north of us, I am satisfied the vines require much more pruning than they do to the south of us. The last summer the apple trees throughout this Island were infested with aphides in such abundance as was never known. The fruit became worthless. When I first perceived them on my trees I diluted some oil soap, and with my syringe sprinkled the trees. Five days afterward I wet them again. I have not been troubled with them since.

I have a pumpkin sweet apple tree, set out fourteen years ago; eight years since the ends of the limbs began to die; I commenced pruning, and cut about six inches below the dead part; they continued to die, till I eventually cut off the whole head. The trunk appears to be perfectly sound. A new thrifty head formed. The last spring, the ends on the northwest side began to die, and I again commenced cutting, and have cut off about one-third of the top. I have examined the roots and they appear perfectly sound. As it has borne no fruit, I think I must cut it down, as a cumberer of the ground. As it is in a row of trees, I do not like to cut it down. Can I do any better than cut it down and set out another?

Allen Coffin.

P. S. I planted six rows of potatoes; when they were five or six inches high, I put half a pint of unslacked ashes on each hill, of every other row. Where I put ashes there was nine bushels; without ashes, there was seven bushels and a peck. I planted 12 rows of potatoes, July 12th I cut off the tops of alternate rows; the cut hills produced twelve bushels, the rows that were not cut produced fourteen bushels.

BUDDING FRUIT TREES.

Eds. Cultivator—I notice in your October number some remarks by R. T., on Budding Fruit trees; desirous of adding my limited experience, I think it suggests a still further improvement. In August 1845, I budded in the usual manner, one dozen Peach trees; they were very small, about the size of a goose-quill near the ground, and the sap so sparing that only half of them took; these were transplanted in March, cut off, and grew about five feet in height; the remaining six I concluded to experiment on—as soon as they had shown half an inch of green sprout, I inserted buds from old trees in the usual way, tying them neatly with bass matting, and then with the finger, covered the whole insertion, except the point of the bud, with a little moist adhesive clay; part of the top was then clipt off, the buds adhered and started in ten days, and in a few weeks attained a foot in length, when I cut the old wood off smooth to the inoculation. On measurement this day, there is from seven to eight feet growth from the bud inserted, in height, and as clean, straight and thrifty trees as one could desire to transplant into an orchard, far superior indeed, to the six transplanted in the spring, whose buds had taken the autumn previous. This method requires little more care and watchfulness as to time, but is preferable, inasmuch as you have the whole summer before you in case of failure; you get a fine growth, as much so as from the natural wood, and that without injury to the stock, whilst trees budded and cut off in August, sometimes die; and if they live and the bud starts, they attain but little growth, the stock becomes stunted, the bark hard and dry, and the growth the following year no more, if as much as you would have obtained from the same bud left until spring.

N. P. Crowell.

Bluffton, S. C., Nov. 21, 1846.

Yellows in Peach Trees.—A correspondent of the American Agriculturist, recommends cutting off peach trees thus affected, even with the ground, and then the roots will sprout up and make new trees. Now it happens that so contagious is this disease, that if the axe or saw used in this proposed operation were applied to a healthy tree, it would communicate the fatal malady; and that proposed method would be as ineffectual as to build a post-and-rail fence to exclude the cholera.

Grafting Grape Vines.—A correspondent of the Ohio Cultivator, grafted exotic grapes into twelve newly transplanted Isabella vines, by the mode of cleft-grafting, about three inches under ground, using no plasters, but pressing the earth tightly round them. Every one took. They bore well the second year. "This year," he adds, which was the third year, "they are growing with wonderful vigor, and are covered with fine bunches of grapes, while the young ones planted at the same time will not be ready to bear these two years. Since then I have grafted every month from February to June, with equal success, and therefore conclude that if grafted under ground, there need be no difficulty."

Apple-tree Borers.—A correspondent of the Massachusetts *Plowman* thinks he *stifled* the borers which attacked one of his apple-trees last summer, by plugging their holes air-tight with soft pine. This is a kind of experiment which seems not likely to do injury, and we see no objection, therefore, to its being tried. T.

DOMESTIC ECONOMY.

SOAP FOR WASHING WHITE CLOTHES.

Editors of the Cultivator—I enclose you a receipe for making a washing soap, given to my wife, which she thinks is capital; and has no doubt it will be found very economical, both on the score of saving soap and the wear of clothes. It had been used by the friend who gave it to her. If it proves what we think it will, every subscriber who uses it, can afford to subscribe for five copies of your paper and give them to his neighbors.

Recipe.—1 gallon good soft soap,
1-2 gallon water,
1 ounce sal soda,
1 gill spirits turpentine,

Mix cold; let it heat gently to a boil; then take it off to cool, stirring frequently until it becomes hard.

Directions for Use.—To a four or five pail boiler, add a tea cup full of the soap. The clothes want to be soaked over night, or slightly washed in the morning before boiling. Must not be boiled over 20 or 25 minutes; suds and rinse in hot soft water, with a little blueing; fig blue is preferable.

The suds, after boiling, is preferable to hard soap for washing calico.

If these directions are strictly adhered to, it will be found that the washing is done with less labor and fuel, the linen and cotton is of a purer white, and the damage by pounding and rubbing is avoided, rendering the garments much more durable. M. Y.

DIFFICULTY IN PRODUCING BUTTER.

Messrs. Editors—I have been for a few years past the wife of a farmer, and, although previous to my marriage, I was quite unaccustomed to a country life, I have been much interested and gratified with the various pursuits and engagements connected with a small farm.

There is one employment that has of late given me "a world of trouble,"—that of churning. Our favorite brindle gives an uncommon supply, for this season of the year, but we cannot with all our efforts and ingenuity, produce any butter. I have availed myself of the experience of my neighbors, but all to no purpose. One has suggested that the cream is too sweet, another that it is too sour, too cold, or too warm, or that the cow is not sufficiently salted; and to all these supposable causes. I have tried to apply the appropriate remedy, (for we have had no less than five unsuccessful churnings.) I have heated the milk, too, when first taken from the cow, but alas, all in vain, and now I have to regret, not only the loss of the butter, but the greater waste of time it has occasioned.

I have sometimes wished, as I have read of the great practical benefits derived by the farmer, from the aid of chemistry, that some kind-hearted chemist would consider milk worthy a place in his laboratory, and the result of his discoveries might cause hope, once more, to dawn on the dreaded churning day.

Mary.

P. S.—We have just purchased one of Kendall's cylinder churns, at the recommendation of the Cultivator, to which we are subscribers, and have used it twice, but as no butter made its appearance, are unable to judge of its merits. There is, however, one evil to which it seems liable—the friction at the ends of the iron axis, produces a collection of black particles of am, which falls down into the milk. This churn is highly recommended in some places, and I should like to inquire of any that use it, whether this occurs in churning a moderate length of time, for I should consider it a serious objection. M.

Hempstead, L. I., Dec. 16th, 1846.

Note.—We should like to know, whether our correspondent's cow was fed on grass or fodder which had been touched by frost, while she was giving the milk from which no butter could be made? We have formerly experienced the same difficulty, but it was generally, if not always, while the cows ate food which had been frost-bitten. What chemical changes are produced on the food or on the milk, by this cause, have not, perhaps, been determined. We should be glad to receive any suggestions in regard to the cause of, or remedy for the trouble complained of. As to the objection mentioned in regard to Kendall's churn, we are informed by a person well acquainted with its use, that if the axis is made properly smooth, in the first instance, and due care is taken to keep it perfectly clean, no difficulty of the kind alluded to, would occur.—Eds.

HUSK BEDS.

Mr. Tucker—Corn husks are becoming an important article of domestic economy. For health, comfort, and durability, they cannot be surpassed. I speak from experience, having used them in my family for more than thirty years; and what is truly remarkable, those beds which have been in use all that time, are to appearance quite as good as new. They are regarded by the medical faculty as conducive to health, and as the best article that can possibly be used by asthmatic and consumptive persons. But the difficulty of separating the coarser from the more delicate fibres, has prevented their being brought into general use. This hindrance has been overcome by the invention of a machine by Mr. C. Boorum, Jr. of New-York, which produced the article in a manufactured state, resembling the finest curled hair. Being nearly as light as feathers, and perfectly free from dust, they form the most pleasant and desirable, and at the same time the most economical article for bedding now in use. Two years since, this gentleman exhibited some of his beds at the fair of the American Institute, for which he received one of its honors. Since this time the demand has rapidly increased. Mrs. B. R. Voorhees.

Amsterdam, Oct. 15th, 1846.

Rationale of Churning.—According to Boussingault, the butter in milk is in the form of minute globules, each globule being enclosed in a very thin, transparent pelicle, which prevents them from adhering together. During agitation by churning, these delicate pelicles break, and the fatty globules immediately unite, and form granules of butter. There is no absorption of oxygen during the process, as was once supposed; the operation succeeds in vacuo, and with the churn filled with carbonic acid, or hydrogen gas.

Keeping Winter Fruit.—The Genesee Farmer says, "A gentleman of experience in these matters informs us, that he invariably puts his keeping fruit in dry sand, and in this way he can keep it two or three months after the usual time, with flavor and freshness unimpaired in the least."

Preserving Apples.—The *Maine Farmer* says that dry, ground hemlock bark, from the tanning mills, has been used for preserving apples with good results. We think this would be preferable to sand or plaster, which some have recommended.

AGRICULTURAL SOCIETIES.

NEW-YORK STATE AG. SOCIETY.

The annual meeting of the New-York State Agricultural Society, will be held in the city of Albany, on Wednesday and Thursday, the 20th and 21st days of January, 1847, commencing at 10 o'clock, A. M., on the 20th. Farmers, and the public generally, are invited to attend. Luther Tucker, *Rec. Sec'y.*

Albany, Dec. 10, 1846.

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At the monthly meeting of the Executive Committee of the New-York State Agricultural Society for December, held at the Society's Hall on the 10th, the President in the Chair, it was, on motion of Mr. Tucker, resolved to proceed to the appointment of committees to award the premiums to be competed for at the annual meeting of the Society in January,—when the following gentlemen were appointed for that purpose:

On Farms—Dr. J. P. Beekman, Kinderhook; Anthony Van Bergen, Coxsackie; Wm. Fuller, Skaneateles.

On Experiments and Essays—A. B. Allen, New-York; Prof. Emmons, Albany; Sandford Howard, Albany.

On Designs for Farm Dwellings—Geo. Geddes, Fairmount; Jno. McD. Mc Intyre, Albany; Ebenezer Mack, Ithaca.

On Cheese Dairies—Benj. P. Johnson, Rome; Tho. Hillhouse, Albany; Ira Hopkins, Auburn.

On Butter Dairies—Zadock Pratt, Prattsville: Rob't. Dennison, Salisbury; E. W. Bateman, Venice.

On Selection of Fruits—L. F. Allen, Black Rock; Dr. A. Stevens, New-York; Dr. A. Thompson, Aurora; J. C. Platt, Plattsburgh; Prof. J. Jackson, Schenectady.

On Wheat, Barley, Rye and Oats—Daniel Lee, Rochester; Squire M. Brown, Elbridge; John Wilkinson, Poughkeepsie.

On Indian Corn, Corn Fodder, and Peas—Asa Fitch, Salem; Benj. Enos, Madison; C. S. Benton, Newark.

On Root Crops—C. N. Bement, Albany; John C. Mather, Schaghticoke; S. B. Burchard, Hamilton.

On Hops, Flax, and Broom Corn—Samuel Cheever, Saratoga; John Rankin, Canandaigua; Justus Harwood, Albany.

On Tobacco, Cabbage, Clover, and Timothy seed—E. Marks, Fairport; G. V. Sacket, Seneca Falls; John Walsh, Albany.

On motion of the President,

Resolved, That Mr. Prentice, Mr. Tucker, Mr. Mc Intyre, be a commitee to make arrangements for the annual meeting of the Society, in January next.

On motion of Mr. Vail, of Rensselaer,

Resolved, That the committee on loaning the surplus funds of the Society, appointed at the last meeting, (having reported in part,) be continued with same powers.

On motion of Mr. Tucker,

Resolved, That the thanks of the Society be presented to Lewis F. Allen, Esq., for a copy of his "American Herd Book," presented to the Society.

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Seneca County.—We are indebted to John Delafield, Esq., President of the Seneca county Agricultural Society, for the Annual Report of its proceedings for 1846. The exhibition for 1846, exceeded in the general competition and interest, any previous show. Premiums to the amount of about $300 were awarded. The prize for the best farm in the county, was awarded to Mr. Delafield, the president; and for the second best, to Mr. John L. Hubbard—for the best acre of winter Wheat, 31 bushels. to J. D. Coe—for the best acre spring Wheat, 25½ bushels, to E. S. Bartlett—best acre Oats, 82¼ bushels, to Jason Smith—best acre Barley, 54¼ bushels, to D. B. Rorison—best acre Indian Corn, 143 bushels ears, to E. S. Bartlett—best quarter acre Sugar Beets, 320 bushels, equal to 1280 per acre, to R. L. Stevenson. The report speaks of the manifest improvement of the cattle of the county, by crossing with the Durhams, many of which, showing good breeding and careful attention, were at the exhibition. The number of sheep in the county, is stated at 75,000, mostly merinos, producing an average of three pounds per head. On the second day of the Fair, the President delivered a brief address, in which he minutely detailed the cost of raising an acre of wheat, under favorable circumstances, and showed conclusively that wheat could not be raised and sent to the mill, at a less cost than twelve dollars and eighty-one cents per acre—or in round numbers, thirteen dollars per acre. Contrasting this cost with the average market value for five years past, he showed that the average produce worked a loss to the county, and was a ruinous course to the farmer. The President then showed that some of the wheat lands of the county had produced from 20 to 35 bushels, and some more, per acre, and pointed out prominent errors in husbandry which produced the falling off; which he termed "a blameable adherence to erroneous practice," and "censurable want of information."

Officers of the Society for 1847.—John Delafield, Geneva (P. O.) President; Jeremiah Rapelyee, Covert; Alanson Woodworth, Ovid; Wm. F. Coan, Lodi; S. J. Folwell, Romulus; Henry Feugles, Varick; Michael Hoster, Fayette; F. J. Swabey, Seneca Falls; Daniel Young, Tyre; Orin Southwick, Junius, and J. L. Hubbard, Waterloo, Vice Presidents; J. D. Coe, Treasurer; Arad Joy, Corresponding, and Wm. R. Schuyler, Ovid, Recording Secretary.

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Monroe County.—At the annual meeting of the Monroe Co. Agricultural Society, held at the Rochester Seed Store, on Tuesday, December 8th. the following named officers were elected for 1847, viz:—Samuel Miller, of Penfield, President; George C. Latta, of Greece, Romanta Hart, of Brighton, John Rowe, of Riga, Vice Presidents. James P. Fogg, of Rochester. Treasurer; James H. Watts of Rochester, Recording Secretary.

Shelters for Stock.—The *Naturalist*, published at Nashville, Tennessee, gives its readers some important advice on this head, in a few words. It says that no farmer at the North, thinks of exposing his cattle, sheep and hogs to the peltings of the storm; but that it is not so at the South. He adds—"if there be reason in anything, shelters are quite as important at the South as at the North. We have much more cold, rainy weather here, and it is the kind to injure stock more than snows, or the cold northern blasts." This is no doubt true; but stock are not as much sheltered, even at the *North*, as they should be, or as would be for the interest of the farmer; though the practice of sheltering is much more general here than in the section alluded to. We agree, however, in the remark that shelter, of some kind, is as important there as here, and would be attended with as great advantages in the saving of food and in increasing the comfort of animals.

CORN AND COB MILLS.

Of all the sciences, mechanics have proved the most useful. If implements may be characterized as the right hand of agriculture, mechanical science, in improving their form and construction, may be said to have given cunning to the right hand; for mechanical science, testing the strength of materials, both relatively and absolutely, employs no more material in implements than is sufficient to overcome the force of resistance, and it induces to the discovery of that form which overcomes resistance with the least power. Simplicity of construction, beauty of form of the constituent parts, mathematical adjustment and a symmetrical proportion of the whole machine, are at the present day characteristics of our implements. In saying thus much, for the science that has improved our implements to the state they now are, when compared with their state some years ago, I am not averring they are quite perfect. They are, however, so far perfect as to be correct in mathematical principles and light in operation. No doubt many may yet be much simplified in construction, and I consider the mechanic who simplifies the action of any useful implement, thereby rendering it less liable to derangement, does as good service to agriculture as the inventor of a new and useful machine.

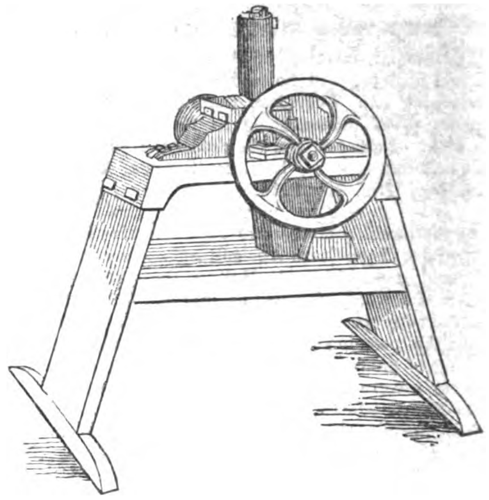
It has been the opinion of most farmers that the cobs of corn were of little or no value, and they have thrown them aside as of no use except for manure. It has been demonstrated by distillation that the cob contains 13 per cent. of nutriment. It is supposed by many that it acts mechanically by distending the stomach, rendering digestion not only easier but much more perfect. Corn or corn meal is generally considered too heating and too concentrated, particularly for working horses, but when mixed with the cob forms a very superior and nutricious food.

My experience teaches me that great benefit is derived by crushing or grinding all kinds of grain for all kinds of stock, and by mixing it with cut hay or straw, a great saving is made.

The introduction of portable mills for grinding corn and cob is of recent origin. Formerly, bark mills were used for crushing the ears, and then it was ground with stones, but the bark mills were not very durable, and millers did not care to grind corn and cob at any rate. Some eight or nine years ago, I carried a load of corn to four mills; at none of them could I get it ground.

In 1842, at the fair of the New York State Agricultural Society, several mills for reducing corn and cob to meal, were exhibited, among which, that belonging to O. Hussey of Baltimore, took the first premium. This machine I have used ever since, and its operation has been very satisfactory.

Since the general introduction of horse-powers, mills have been in request. Demand creates supplies. The inventive genius of our countrymen has been aroused; new mills have, as it were, sprung into existence, among which I would name that of Mr. Pitts of Rochester. This seems to me the most perfect thing of the kind which has fallen under my notice. It is upon the true principles of a mill for this purpose—that of chipping or cutting both corn and cob into sufficiently fine chop, resembling fine samp or hominy. It requires but little power, in comparison to some other mills, to drive it, and is very simple, occupies but little space, and works equally well, whether the corn be soft or hard. It consists of a cast-iron wheel about nine inches in diameter, armed with a series of small chisel-shaped teeth or knives, set like plane-irons in the face, in a very simple manner; one set of teeth following in the space of the others, by which the chipping is done. This wheel is enclosed in a cast-iron box, and on the shaft is a balance wheel and pulley, five inches in diameter, for the power band. These knives can be taken out, ground and replaced in a few minutes; and a new set can be obtained for two dollars and fifty cents. If care is taken to introduce no hard or injurious substance to the mill, one set of knives will last for a long time. It will grind from three to four hundred bushels before the knives require sharpening.



Pitts' Corn and Cob Crusher.—Fig. 12.

I have had one of these mills in use on my farm, about nine months; it is driven by a small water-wheel, supposed to be about two horse power. With this power it will, when the teeth are sharp, reduce from five to six bushels of corn and cob in the hour. One of these mills has been in operation in this city for grinding feed, such as oats and corn, as well as corn and cob, for supplying cartmen and others with provender, for about one year. The owner tells me that it will grind from ten to twelve bushels per hour, and requires sharpening after three hundred bushels has passed through it; that it requires some skill and attention to keep it in order, and that it will do more work than any other mill he has ever seen.

Knowing that Mr. Geddes of Onondaga, has had one of these mills in operation for more than a year, I addressed him a note, containing a few inquiries on the subject of its operation. The following is his reply:

"Grinding corn fine," says Mr. G. "and also reducing the cob fine, *takes power, if done fast*. If the mill is so set as to make *samp*, that is, to reduce the grain as to leave none larger than half a grain of wheat, and a great part of it fine, then Pitt's mill will do more than any thing ever heard of before. I think twenty bushels can be forced in one hour through one of them, if the ears are selected, and power enough is put on the mill. We have ground fifteen bushels without selecting the ears, but it was not ground fine enough. My opinion is, that it cannot be ground too fine, if it is fed raw; but if it is to be cooked, then, if not so fine, the only objection is, it will take longer to cook it.

"Pitt's mill will grind fine if the teeth are set fine, and time is given for the process, but if you set it so as to grind as fine as common mills do, when they do their best work, you will not, probably, get more than from four to five bushels through it in an hour. As to the power required, I answer, the more the better, until you are able to sustain a motion of fifteen hundred revolutions a minute while you push the ears down hard for the teeth to get hold; but for a small business, this is not necessary. About the power of two horses would do good business.

"A mill owner, two miles from me, has expended probably $1500 in erections for grinding corn in the ear, and I can, probably, grind two bushels to his one, and not $200 invested. The only thing required to keep my mill in order, is, once in, say three hundred bushels, to grind the teeth and set them in the machine, perhaps an hour's work.

"Grinding has become quite an object with me since I purchased Pitt's mill. I intend to grind all my feed, and do as much custom work as I can get.

"As to feeding cob meal, my opinion is, that it is just the kind of food for working horses, and I feed it, cooked, to my swine and cattle that I fat. I can grind it cheaper than I can thresh the corn."

Since the foregoing was written, I have been informed that Mr. Pitts has made a very important improvement in his mill, by dropping the bed plate and concave a little, by which means the feeding is more perfect and its powers very much increased.

The only objection to this mill, that I have discovered, which is the fault of several others; it requires the constant attention of one person to feed it, as only one ear can be put into the tube at once. When shelled corn, or oats and corn, are to be ground, a hopper with a tube to fit the mill is required. This tube should have a slide to regulate the feeding, otherwise the weight or pressure of the corn will retard the motion and lessen the speed.

The price of these machines is forty dollars. and may be had either of Mr. John A. Pitts. of Rochester. or at the Albany Agricultural Warehouse. of Luther Tucker. editor of the Cultivator.

C. N. BEMENT.

Albany, December, 1846.

"SCIENCE AND AGRICULTURE."

THE Genesee Farmer for this month, contains two columns of criticism, by Dr. LEE, editor of that paper, on an essay prepared by me last winter, and published in the Transactions of the State Agricultural Society. I had concluded to pass this attack without remark; but it has been urged upon me that some explanation is needed, and is especially due to the committee who awarded a premium on that essay. The committee indeed are abundantly able to defend themselves from the implied censure in Dr. Lee's remarks; but then they ought not to be blamed for any omission of mine, altho' that omission would be readily supplied by the good sense of a candid reader.

It may perhaps serve as some apology for the essay, that it was hastily written for the Transactions referred to, without the remotest expectation or thought that it would be offered for the premium. Hence it was not guarded at every point against captious criticism; and hence in giving the compositions of some manures to show their relative strength, on the authority of the English Agricultural Gazette, I did not state, what is generally known, that such manures vary in composition. Scarcely indeed, should I have deemed such statement necessary, as the quotation was merely intended to convey a general idea for illustrating a principle. The composition there given may not be strictly correct, but I believed it near enough to show the great and general difference between common manure and guano; and I quoted it with less hesitation as it accorded nearly with the results of my own practice. I could not regard it therefore, as Dr. Lee does without any assigned reason, as a "humbug."

The practice of giving the result of a single analysis, as a general average, is common among the most eminent chemists; and Dr. Lee frequently does so himself, both by quoting the results obtained by others, and by assertions without authority, even of some substances which vary greatly in composition.[*] Hence the strong phrases which he applies to my remarks, of "errors," "absurdities," "humbugs," "sweeping conclusions," and "gross perversion,"—would apply with equal force to his own writings.

Dr. Lee occupies nearly a column in controverting the fact that animals secrete highly fertilizing substances; and concludes by saying, "No farmer must expect his domestic animals to supply him with more or better manure, than their food and drink will furnish." According to this assertion then, the richest stable manure is no "better" than hay, straw, oats, and water, spread over the surface of the land—a ridiculous error, which every farmer must see at a glance.

I have thus shown the injustice of Dr. Lee's *two* charges; and that instead of proving errors against me, he has himself fallen into errors in the attempt.

I regret this indication of his hostility, for which I am not conscious of having afforded any cause. Indeed it is with much reluctance that I have consented to point out his errors, and have no wish for controversy of any kind.

J. J. THOMAS.

Macedon, 11 mo. 28, 1846.

GOOD SHEEP.—The *Maine Farmer* states that Mr. CHARLES PERLEY, of Woodstock, New Brunswick, has a flock of long-wooled sheep of the Leicester and Lincolnshire cross, 73 of which gave, at the last shearing, 524 lbs. 1 oz. of clean wool, being an average of over 7 lbs. per head.

BEECH-NUTS FOR POULTRY.—The *Maine Farmer* says that WM. HUTCHINSON, of Readfield, is in the habit of fatting troops of turkeys on beech nuts. He drives them, it is said, out into beech-groves, and there they feed themselves; and after being thus driven a few times, they will go of their own accord. They eat the nuts with avidity, and when they are killed, their flesh is said to be excellent, having a peculiar flavor given by this kind of food.

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[*] Examples from Dr. Lee's writings could be furnished in abundance, but the reader will find several instances on pages 49, 50 and 51, of the same volume of the Transactions in which the essay in question was published. He there gives in part, the composition of several vegetable substances, without the slightest intimation of any variation in their ingredients, although such variation has been fully shown by the various analyses of Sprengle, Berthier, Davy, and others. These eminent chemists have proved that some of the constituents which Dr. Lee names, vary 100 to 150 per cent in some cases. A still more striking case of variation is given by Johnston, on the authority of Hermbstadt, where the quantity of nitrogen in grain was increased nearly 400 per cent, merely by the application of certain manures.

The only difference between these cases from Dr. Lee, and that which he so strongly denounces in the essay, is, that he stated them entirely on his own authority, while I only copied from another work, naming the authority.

CONDENSED CORRESPONDENCE.

BOOK FARMING.

A correspondent with the signature of "Viator," and who dates at Coxsackie, states, that being not long since, on a visit at a friend's house, he partook of some excellent cheese—as good, he says, as he ever tasted. On inquiring into the process of its manufacture, he ascertained, that the person who made it had not much practical knowledge of the business, but had obtained through the medium of "the Encyclopedia," the only information she had received on the subject. He observes—"Cheese making is admitted to be one of those complicated processes, the *success* of which depends on a series of operations, partly chemical and partly mechanical, which must succeed each other in a *certain* order, very easily understood when *seen*, but somewhat difficult to be described in words. Still Mrs. C. learnt it in "the Encyclopedia." She had never seen cheese made when she first undertook to make it herself; and that her cheese is first rate, appears from the fact, that it has taken the first premium of the Greene county Agricultural Society, for two years. Now if this *intricate* business can be learnt in "the Encyclopedia," why cannot any of the other and more simple operations of the farm be so described in books as to enable any man of common sense to understand and practice them?"

PHRENOLOGY AS APPLICABLE TO THE HORSE.

Mr. **Thomas J. Lewis**, observes, that, while reading Dr. **Combe**'s celebrated work on Phrenology, his attention was particularly drawn to the article on page 205, in relation to the horse. "It is there shown," it is said, "that the shape of the brain, even in the lower animals, indicates their good or bad disposition. Almost every one," he continues, "is aware, that the value of the horse is very much enhanced by his being docile and tractable. According to the article alluded to, when the organ of benevolence is largely developed, the animal is mild and docile; when it is small they are vicious, ill-natured, and intractable. In the horse, the organ is placed in the middle of the forehead, a little above the eyes. When this region is hollow, a horse is invariably vicious and inclined to bite and kick. In mild and good natured horses, on the contrary, this part extends as far out as the eyes, or even farther.

"The driver of a cabriolet of Neuilly, says Dr. Gall, bought at a low price, a horse which nobody could use on account of its extremely bad temper; but it was an excellent runner. In the first week it bit off two of the driver's fingers and one of his ears. He attempted to correct the evil by redoubled blows, but these only rendered the animal more vicious. He then resolved to try the effects of gentle treatment, and this succeeded to a certain extent. The organ in question was very small in this animal; and the same conformation will be found in all horses which require to be muzzled to prevent them from biting."

CULTIVATION OF THE CRANBERRY.

[We have been furnished by the Rev. H. B. **Holmes**, of Auburn, Worcester county, Mass., with the following extracts from a letter received by him from a friend, in regard to the culture of the cranberry.—**Eds.**]

"1st. You must not think of sowing the seed—but set out the roots.

"2d. You wish to know how to prepare the ground. It is important that you contrive some way to prevent and destroy the growth of the grass and bushes, if there are any. This can be done either by plowing, burning, paring, or covering with gravel.

"3d. How to set out the roots. After the land is prepared, procure your roots in bunches about as large as it is convenient to take up with a common shovel. It is important to be careful in taking up the roots. Have a sharp shovel or spade, so as to disturb them as little as possible, and turn aside the vines, so as not to cut them off. Dig a place in your prepared ground about the size of your bunches of roots and set them in. You can have them about as near as hills of Indian corn usually are, or nearer if you please. The nearer they are the sooner they will cover the ground. They are not difficult to make live, but the better you prepare the ground, and the more carefully you set them out, the better they will flourish.

"4th. As to the time of setting them out. This may be done in the autumn or spring; but I should prefer the spring; because when set out in the autumn, the frost is apt to throw them out of their place. This however can be prevented by a little flowing. I should set them out as early as possible in the spring.

"5th. As to flowing. It is regarded as very important to be able to flow at pleasure. Supposing you set out your roots next spring; if you can flow them a little in the coming fall and winter, just so they may not be troubled by the frost and consequent heaving of the ground, they will come out bright and healthy in the spring.

"6th. During the summer when the vines are growing, and the fruit is upon them, it is important to look out for the weather, and if there is danger of frost, flush the water over the ground, so as to prevent the bad effects upon the vines and the crop. When you can flow at pleasure in this way, you are almost sure of a crop annually."

CLEANING SEED WHEAT.

Eds. Cultivator—I do not recollect having seen published the method of cleaning seed Wheat, that is practiced by careful farmers in this county, and knowing that by this method Wheat can be made perfectly clean of chess, or cheat, as it is called here, together with all light grains of Wheat, or any other grain, the weight of which is less in proportion to its bulk, than good Wheat.

After the Wheat has been run through the fan or windmill, as we term it, prepare the mill by taking out the sieve and placing a shingle about eight inches wide it its place; next, detach the shaker (the technical term for which I do not know) and place a hand in its place, who is instructed to give gentle motion to the hopper, and to regulate the quantity of Wheat running through it. An able hand should turn the fan and produce a current of air strong enough to blow out every thing except the heaviest Wheat. The skreen should be open to remove sand or cockle, or any small grain that might run down; the process should be continued as long as there remains one grain of chess to a handfull of wheat. Farmers who have been *cheated* into a belief of the transmutation of Wheat, and suffer by it, are invited to try this method to clean their seed, and in connection with sowing clean seed, to take care that no cheat is carted on the land with the mannure, or fed to hogs or poultry, unless it is scalded or ground. All seeds of weeds or grass in the soil intended to be seeded, should be sprouted and destroyed by frequent plowings. *Chester Co., Pa.* A. B.

ON THE USE OF LIME.

In the September number of the Cultivator, is a communication from C. N. Bement, Esq., in which he assumes it as an established fact that "lime produces the greatest effect upon a limestone soil."

So far as my experience goes, the fact is directly the reverse. Ten years ago I put about 1,500 bushels of lime upon about 30 acres of strong limestone land; but I never could perceive the least advantage from it. I know of no better mode of improving this kind of soil, than by the application of stable manure, vegetable matter, sulphate of lime, and ashes. With the use of guano aud ground bones, I have no experience.

The limestone rock of this valley is immediately covered by a thick bed of reddish clay. Where this clay approaches the surface, any coarse vegetable matter, such as chips, cobs, or the refuse bark from the tan-yard, is of use to loosen the texture of the soil. If this vegetable matter is not spread too thickly, it requires no fermentation—its acid properties being quickly neutralized by the lime in the soil.

In many places adjacent to the foot of the Blue Ridge, this bed of clay is covered with a thick deposit granite boulders, gravel, and fragments of talesse slate. In such places, a coating of this clay spread on the surface, is of very great advantage. Its chemical properties are probably similar to those of marl. Its effects on the soil are immediate and permanent; and I believe it would well repay the expense of applying it in large quantities.

In a communication in your October number, J. D. Jones, Esq., has related an ingenious experiment, which he has made in the improvement of worn-out soils. This experiment well deserves attention, but if Mr. Jones thinks it overthrows any of the arguments of Ruffin, he is, in my opinion, mistaken. Ruffin speaks of the *permanent* improvement of soils. His expressions imply that where land is poor, there must be some deficiency in the chemical constitution of the soil, and this deficiency must be supplied before it can become *permanently* productive. Mr. Jones has doubtless greatly improved his field, but will the improvement last? If he begins to take annual crops from his land, and permits his stock to feed off the surplus herbage, will it not soon be reduced to the same state in which he found it? Now, a coat of marl, such as Ruffin applied to the worn-out lands of Virginia, or a coat of *green sand*, such as is found in New Jersey, might benefit his land for fifty years, and enable the vegetable matter left upon it to produce far greater effects.

Yours, &c., E. B.

Smithsburg, Wash. Co., (Md.,) Oct. 31, 1846.

RECENT AMERICAN PATENTS.

Reported for "The Cultivator," by Z. C. Robbins, *Mechanical Engineer, and Attorney for procuring Patents, Washington, D. C.*

Improvement in *Smut Machines;* Henry Staub, Martinsburg, Virginia, May 16th, 1846.

Claim.—"Having thus fully described the construction and operation of my machine for cleaning wheat; I would observe, that I do not claim the use of beating wings with roughened surfaces, for cleaning wheat of smut, garlic, &c.; but what I do claim, as my intention and desire, to secure by letters patent, is the giving the face of the beating wings of my improved smut machine, a rough and sharp cutting surface, by covering them with a series of saws, over-lapping each other, (with their teeth projecting,) and arranged substantially in the manner herein set forth."

The above machine is simple and economical in its form and construction, and highly approved by millers.

GOOD CROP OF CORN.

Editors Cultivator—Below I give you an account of a field of corn I raised this season, containing eight acres; the ground had been cleared some ten years, and used for pasture; it was plowed for the first time a year ago last summer, and left so rough that it was necessary to harrow it over five times before I could fit it for the plow this spring; then plowed once and harrowed three times, and planted on the 22d and 25th of May, in hills three feet and two inches apart, each way—when plowed, the field was completely covered with Canada thistles, which fact will satisfactorily account for the enormous amount of time spent in hoeing:

1st harrowing,	4 days,	10s	$5,00
Plowing,	6 "	"	7,50
2d harrowing,	2½ "	"	3,00
Furrowing,	1½ "	"	2,00
Planting,	7 "	4	3,50
1st hoeing,	23½ "	"	11,75
2d "	21½ "	"	10,75
3d "	15½ "	"	7,75
Cutting up,	12¾ "	6	9,56
Husking,	63½ "	4	31.75
Drawing stalks	6 "	12	9,00
Repairing fence	6 "	4	3,00
			$104,56

Making an expense of about thirteen dollars per acre, as an offset to which we have husked 1500 bushels of ears of corn, which being mostly an eight rowed yellow, with large kernels and small cob, I think will turn out fully 800 bushels of shelled corn, besides sixty loads of excellent fodder. Yours respectfully,

E. V. W. Dox

La Fayette, Onondaga, N. Y., Dec. 1st, 1846.

TILE DRAINING.

Messrs. Editors—I notice in the Cultivator for November, page 330, in quoting Colman on tile draining, you say, an objection to this improvement in this country is the liability of the tiles to be broken by frost. In 1835, I sent for a tile from Scotland, for a pattern, and have since used a number, and have never known one broken by frost.

I had upwards of 70 rods of tiles laid over winter along side of a drain; winter with hard frost having come before I got them laid in, and they were as good as ever in the spring. When I see the like of you and Mr. Colman in error, it pleases me to set you right, more especially when the error may deter my brother farmers from such a beneficial improvement. The greatest objection to tile draining is the cost of the tiles, being three times the cost they are in Scotland; however I notice by the papers, that by the aid of machinery in Scotland, two men and a boy can make 11,000 tiles, fifteen inches long in a day. Of course, this must still reduce their price there very much, and I make no doubt some of our enterprising mechanics will immediately have the same plan of making them so that it will reduce the price here. Mr. Whartenby, at Waterloo, Seneca county, makes them as good as they do in Scotland; the price he charges is twenty cents per rod, and even at that they are cheaper than stones, and much better. I can have the drains dug here as well as they can be done in any country, but not quite so cheap. The digging of a drain 2½ feet deep, costs me about 5 or 6 cents per rod, by hiring men by the month, and not taking board into the account. John Johnston.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

☞ We have great pleasure in being able to present the first number of the new volume of "The Cultivator," to our friends and the public, in a style which we think cannot fail to please. In its illustrations—in the beauty of its type,—the fineness of its paper, and the neatness of its execution, it can hardly be excelled. With the richness and variety of its contents, our readers can not fail to be gratified, containing as it does, contributions from many able pens, both at home and abroad, embracing a great variety of subjects of high practical value to the agriculturist. We trust the public will receive it as an evidence of our constantly increasing desire to aid in developing the agricultural resources of our country, and in elevating the character and standing of the American farmer.

Our arrangements for the future, are such as enable us to guarantee to our friends, that the character and interest of our pages will be fully sustained. Having made a permanent arrangement with Mr. Sanford Howard, who has been for two or three years past associated with us, and who is so well known as one of the most sound and intelligent of American writers on rural subjects, his name will hereafter appear as one of the Editors, and Mr. H. will, in future, spend a larger portion of his time than heretofore, in visiting our farmers, that he may ascertain from personal examination, the improvements which are in progress in various parts of our country, and report them for the benefit of our readers. Mr. John J. Thomas, of Wayne County, we are happy in being able to say, will continue his contributions to the editorial department of the Cultivator, his articles hereafter bearing the signature of "T."

Grateful for the liberal appreciation our labors have hitherto received, we tender our friends the heartfelt congratulations of the season, and beg to assure them of our untiring devotion to the great work of agricultural improvement, in which we have been so long laboring, with such acceptation on the part of the public as has yearly encouraged us to new and more zealous efforts.

Communications have been received since our last, from Elijah M. Davis, John Johnston, Thos. J. Lewis, Allen Coffin, Schuyler Worden, J. T., Charles R. Smith, Caius, George Colmer, S. B. Buckley, Nathan Howard, Viator, C. B. Stuart, the Son of a Subscriber, M. Y., E. V. W. Dox, W. H. Sotham, the Shakers, Peter Saxe, H. A. P., Rev. H. B. Holmes, S. Baldwin, H. A. Parsons, P. C. Schuyler, Prof. John P. Norton, Mary, C. N. Bement, J. B. D., E. N. Horsford, Wm. Bacon, J. Horsford, James Eaton.

Books, Pamphlets, &c., have been received as follows:—

Analyses of Grains and Vegetables, &c. By E. N. Horsford, A. M. 12 mo. pp, 68. Boston. Munroe & Francis.

Analysis of the Oat. By John P. Norton, Farmington, Conn.—octavo, pp. 36. This is the essay which received the prize of $250 from the Highland Ag. Society of Scotland, last year.

Transactions of the Ag. Society and Mechanic's Institute of New-Castle county, Delaware. 50 pages octavo.

Annual Report of the Commissioner of Patents for 1846. From Hon. John A. Dix.

The Agricultural Magazine and Journal of Scientific Farming, for the months of April, May, September and October. London: Edited by F. Crisp, Esq., late one of the Editors of the London Farmer's Journal. [We should be glad to receive the Nos. for June, July and August.]

Dombey & Son. Part 2. By Charles Dickens. With illustrations by H. K. Browne. From the publishers, Messrs. Lea & Blanchard, Philadelphia.

Chemistry of the Four Seasons. By Thomas Griffiths, professor of Chemistry in the Medical College of St. Bartholomew's Hospital, London. pp. 450. Philadelphia, Lea & Blanchard.

Memorial for a National Rail Road from the Missouri river to the Pacific Ocean. By George Wilkes. Pamphlet, 24 pages.

Report on Horticulture, at the late Fair of the American Institute. By Thomas Bridgman.

The Science of Agriculture; an Address delivered before the Middlesex county (Conn.) Ag. Society. By Prof. John Johnston. And the Sentinel and Witness newspaper, containing the Reports of the committees of the same Society.

☞ The communication from Mr. Saxe, will be given in our next, accompanied by a portrait of "Lady Messenger" and her colt.

J. T.—We will endeavor to make room for you next month.

☞ We are indebted to the Shakers at New Lebanon, for the plans and elevation of their barn, a description of which was given in our last volume, page 305. The drawings are on too large a scale for our paper, or we should be glad to insert them. We may be able to use them hereafter.

Agents—With our last number, we sent prospectuses for the present volume of the Cultivator, to all those who have heretofore aided us by acting as agents. We shall feel under great obligations, if they will make such efforts, as their convenience will permit, to procure a renewal of subscriptions, and to increase, as far as possible, their lists. The products of the farm now bear a fair price, and it appears to be a favorable time for an effort to increase the circulation of such works as the Cultivator.

Hearle's Cement.—Will "Zea," of Montreal, have the goodness to furnish us with the mode of making this composition?

Peas and Oats.—"A Son of a Subscriber"—(Boston.) We know nothing more in regard to the crop of peas and oats, spoken of in our December number, than what was there given. The practice is, to harvest the peas and oats at the same time, and thresh them together.

Cranberries.—"D. C."—(Parkersburg, Va.) We would direct your attention to an article on this subject in this number.

Straw and Stalk-cutter.—"P. C. S."—(Ithaca, N. Y.) We think Hovey's spiral cutter would not be liable to the objection of clogging, of which you speak: but as you want a machine, chiefly for corn stalks, to be worked by horse power, we think you would be well suited with the "Pennsylvania cutter," so called, the price of which is $25. See advertisement in this number.

Clover-seed and Clover-hulling Machine.—"O. H. S," (Canton, N. Y.) We believe from three to five bushels of clean seed, per acre, is considered a good crop. The prices of machines for cleaning, is, from $20 to $60, acording to their size, and the work they are capable of performing. They are made by T. D. **Burrall**, of Geneva, and by A. **Wheeler & Brothers**, Chatham 4 corners, Columbia Co., N. Y.

Correction.—In Mr. Prince's article on strawberries, in our November number, the *crimson cone*, was stated to be staminate. We are informed that it is pistillate.

☞ Under the head of **Domestic Economy**, we give this month several communications, with which we have been favored by our female correspondents. We shall continue this as a separate department, and shall at all times feel obliged for any contributions in reference to household concerns.

Orange Quinces.—We accidentally omitted to acknowledge in our last, the reception of a dozen very large and beautiful Quinces from Mr. **Bradford Walker**, of Canandaigua. Finer specimens of this fruit, we never saw. We are also indebted to **Samuel Hamilton**, Esq., Rochester, for a bushel of the Portugal Quince.

Superior Swine.—We have before spoken of the stock of swine kept at the Insane Hospital, Worcester, Mass., known as the "Hospital breed." Two very fine breeding sows have lately been procured from the Hospital, and brought into this neighborhood. They are about as nice a *model* in form and points, as anything we have seen of their species. We have no doubt their introduction here will be highly beneficial.

To Emigrants.—Such of our readers as contemplate removing to the west, are referred to the advertisement of some fine land in Illinois, which will be found in this paper, which will be sold in lots to suit purchasers, at low rates and on favorable terms.

Root or Vegetable Cutters.—"J. B.," (Washington, D. C.) The best machine we have ever seen for cutting vegetables for stock, especially for sheep, is **Gardner's**, an English invention. It cuts the roots in pieces, or rather strips, three-fourths of an inch wide by half an inch thick, and at the rate of a bushel per minute, with one hand. Its cost in England is about £5, or $25. Mr. **Thomas Noble**, of Massillon, Ohio has several of them in use. The best machine for this purpose, made in this country, as far as we know, is **Ruggles, Nourse & Mason's**. It cuts into pieces one and a quarter inch square, by any thickness desired, and with great rapidity. The price is $12. It is for sale at the Albany Agricultural Warehouse. See advertisement.

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THE MARKETS—FOREIGN AND DOMESTIC.

By the Cambria, arrived at Boston on the 16th ult. we have English papers to the beginning of December. The intelligence in regard to the demand for breadstuffs, has not had much influence on our market. The English trade was animated and prices were maintained; but the supply of provisions in Europe is greater than what was at one time expected. The potato disease is said to have been less destructive on the continent last year, than in 1845, and potatoes were being sent to England from St. Petersburgh. The wheat harvest is said to have been magnificent in the ancient Polish provinces, and in those districts of Russia and other countries which supply Odessa, and the ports of the Black sea, and as the people of Poland and Russia live chiefly on rye, it permits nearly all the wheat to be exported. The peasantry in some parts of Ireland are still suffering from want of food; but it is stated that the progress of destitution has been less rapid and destructive than some accounts might have led us to expect. Corn and provisions of all kinds, were becoming more abundant. The destitute peasantry were being employed on the public works to a great extent, 150,000 being already engaged, and the number increasing rapidly. An English paper gives the following table of the stores of Grain in the principal Entrepots of Europe, in the last fortnight of October;

Nice...qrs. [of 8 bushels]	20,793	London..........qrs.	149.700
Genoa	22.083	Liverpool	131.000
Leghorn	25.296	Glasgow	53 727
Amsterdam	431.021	Leith	40.077
Rotterdam	46.224		
Hamburgh	18.300	Total	998.274
Dantzic	90,000		

The cotton and wool trade, (except for very coarse wools) was said to be brisk; but in the manufacturing districts trade was represented as exceedingly dull.

The Mark Lane Express, of November 30th, states, that 36 bales of "United States wool" were sold at public auction in London, on the 25th of that month, at 1s 1d, to 1s 2½d, or 27 to 30 cts. per lb.

The same paper states, that the imports of Wool into London, for the week ending Nov. 30th, were 3,576 bales. Of this quantity 2,363 were from Russia, 514 from Sydney, 337 from Germany, 160 from Spain, 30 from Italy, 41 from the Cape of Good Hope, 7 from Austria, 55 from Calcutta, 26 from the United States, 3 from France, and 40 from Monte Video.

Inquiries are sometimes made in regard to the relative value of different kinds of wool in the English markets. The following extract from a table which we find in the *Quarterly Journal of Agriculture* for October, shows the prices of Merino, South Down, Leicester and Cheviot:—

	s. d.		s. d.	
Merino,	14 0	*to*	20 0	per 14 lbs
" in grease,	12 0	*to*	16 6	"
South Down,	14 0	*to*	20 0	"
Leicester Hogg, yearling,	12 6	*to*	19 6	"
" Ewe & Hogg,	11 6	*to*	16 6	"
Cheviot white,	10 6	*to*	14 6	"

From this it appears that Merino wool, washed, was worth from 25 to 35 cts. per lb.; South Down the same; and Leicester Hogg, (or yearling's,) fleeces, 23 to 34 cts. per lb.

PRICES OF AGRICULTURAL PRODUCTS.

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New-York, Dec. 19, 1846.

FLOUR—Genesee, per bbl, $5.56¼a$5.62½—Ohio and Michigan, $5.37½a$5.44.

GRAIN—Wheat, inquired for, and $1.25 per bushel demanded for Genesee, but no sales reported.—Rye 84 c,—Barley, 65c.—Oats, 39a40c.—Corn, Northern and Jersey, 75a80c.—market closed firm at 80 c. Purchases mostly for England.

BUTTER—Orange County, per lb., 16a18c.—Western dairy, 13a15c.—Ohio, 8a9c.—Shipping, 6½a7c.

CHEESE—Best shipping, per lb., 7a7½c.

BEEF—Mess, per bbl., $8a$8.25—Prime $5 75a$5.87½.

PORK—Mess, per bbl., $10—Prime, $8 12½a$8.25.

HAMS—Smoked, per lb., 8a9 cts

LARD—Per lb. 7½a8c —Ohio, 7½a7¾.

HEMP—Russia, clean, per ton, $210—American, dew-rotted, $90a$95—American water-rotted, $130a$135.

HOPS—Per lb., first sort, 10a11c.—Second do., 8a11c.

TOBACCO—Connecticut, per lb., 10a11c—Kentucky, 2¾a4½c.

SEEDS—Flax, per bushel, $1.25—Clover, per lb., 6½a7c.—Timothy not in demand.

COTTON—New Orleans and Alabama per lb., 8¼a11½c.—Florida, 8¼a10¾—Upland, 8¼a10¾ cts.

WOOL—(Boston prices.) Dec 10:

Prime or Saxon fleeces, washed per lb.	38a40	cts.
American full blood fleeces,	32a33	"
" three-fourths blood fleeces,	25a28	"
" half blood do	23a25	"
" one-fourth blood and common,	20a22	"

Remarks.—The tendency of the news by the Cambria, has been to give flour a slight advance, and to render the holders of grain more firm. Cotton has advanced half-a-cent per lb. Butter of good quality is in demand. The demand for cheese for exportation is likewise good. Pork is doing better.

Agricultural reading.—Milton J. Ross, of Allen Co., O., says, in the Ohio Cultivator, "This year I had twenty bushels of wheat to the acre, from a field of forty acres—which for this region is a remarkable crop—and I attribute the extra yield *entirely to knowledge I have obtained by reading*. When I commenced farming, twelve years ago, my wheat crop was only six to eight bushels per acre." * * "Mr. Buel, in his life time, furnished me information, through his "Cultivator," in relation to making and using manures, that is worth to me, at least *five hundred dollars*. Mr. Buel also learned me how to raise one hundred bushels of potatoes from two bushels planting."

LIVE STOCK MARKET.

Brighton, Mass., Monday, Dec. 7.

At market 540 Beef Cattle, and 425 Stores, 8 yokes of Working Oxen, 30 Cows and Calves, 3,700 Sheep and Lambs, and about 700 Swine.

Beef Cattle—Extra, at $5.75—first quality, $5 50—second quality, $4 50a$4 75—third quality, $3.50a$4.

Working Oxen.—Sales were made at $62, $67, $70, and $72.

Cows and Calves.—Sales were noticed at $17, 18, 20, 21, 26, 28, 31, and $42

Sheep and Lambs.—Sales of lots at from 75c. to $1.12, and $1.03 to $2.25.

Swine.—Sales at wholesale at 4½c. for sows, and 5½ for barrows. At retail from 5½ to 6c.

MACHINES AND HORSE-POWERS.

CORN AND COB CRUSHERS, several kinds, among which are Pitts', Sinclair's, and others.

PORTABLE GRIST MILL—Fitzgerald's Patent Cone Burr Stone Mills, for wheat, corn, salt, coffee, &c.

HORSE POWERS, single and double, and Threshing Machines, with and without Separators.

SMITH'S PATENT CORN SHELLER AND SEPARATOR, for Horse Power, constantly on hand at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany.

LUTHER TUCKER.

Jan. 1.

TO NEW-YORK FARMERS AND EMIGRANTS.

ONE hundred and fifteen thousand acres Illinois Lands for sale, in tracts of 40, 80, 120, 160 acres, or more, to suit purchasers The lands are all first rate, and among the very best in the state, and are situated in the counties most densely settled, viz., Morgan, Scott, Cass, Mason, Menard, Green, Sangamon, Logan, Christian, Mason, McLean, Woodford, and Macoupin. To actual settlers every reasonable indulgence will be given as to time of payment. The price from $3 to $5 per acre.

A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

"*Beardstown, Cass Co., Ill., Jan. 10, 1846.*

THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

"A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

"Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYRES, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG,
No. 9 North Fourth-st., Philadelphia.

Jan. 1, 1847.—6t

TO WOOL-GROWERS.

THE subscribers have a tract of land lying in Patrick Co., Va., consisting of about *ten thousand acres*, which they wish to sell or rent. It has on it immense quantities of the largest timber, with abundance of water, and water power. A portion of the land has been cleared, and produces the finest grass in the world. We would like to dispose of it, or to enter into partnership with any gentleman who would furnish a flock of sheep, and go into the business of growing wool. Apply by letter to either of the subscribers, at Cumberland Court House, Va., or in person to Col. A. Staples, Patrick Co., Va., who will show the land.

WILLIAM W. WILSON
WILLIS WILSON.

Sept. 1 6t

NEW-YORK AGRICULTURAL WAREHOUSE.

(ON COMMISSION.)

A. B. ALLEN, 187 Water-st.—Farming Implements and Seeds, Wire Cloths and Sieves; Fertilizers, such as Guano, Lime, Plaster of Paris, &c.; Fruit and Ornamental Trees and Shrubs; Improved Stock, Horses, Cattle, Sheep, &c.

Editor of the American Agriculturist, a monthly publication of 32 pages, with numerous engravings. Price $1 a year.

Jan. 1—2t.

NEW ORLEANS AGRICULTURAL WAREHOUSE.

THE subscriber will keep constantly on hand for sale farming and plantation implements, of all kinds suitable for the southern market. He will also execute orders for improved stock, such as horses, cattle, sheep, &c., and receive subscriptions for the American Agriculturist, a monthly publication of 32 pages, with numerous engravings. Price $1 a year. R. L. ALLEN.

New Orleans, Jan. 1, 1847.—2t

THE FRANKLIN HOUSE,

No. 105 Chestnut-street, between Third and Fourth. Philadelphia.

THIS popular and central hotel, established by the Messrs. Sanderson, having passed into the hands of the subscriber, he desires to inform his friends and the public, that it is now open for the reception of guests.

To those who have visited "THE FRANKLIN HOUSE," its advantages as a desirable stopping place are well known; to those who have not, it will only be necessary to state that it is situated in the busiest part of the most fashionable street, in the immediate vicinity of the Exchange, Post Office, Banks, Custom House, Places of Amusement, Hotels, Steamboat Landings, Railroad Depots, Public Squares, Court Houses, &c., &c.

Since the change of proprietors, a large amount of money has been expended in enlarging, refitting, refurnishing and painting. Among the numerous improvements, may be mentioned improved entrances, a new Ladies' Ordinary, a new Gentlemen's Dining Saloon, new parlors, new chambers, new kitchen, and new bar-room, besides many other minor improvements.

The principal features of a first rate hotel, "the Table and Wine Cellar," will be under the management of Mr. JAMES M. SANDERSON, one of the former proprietors, whose ambition to excel as a caterer is well known. His widely celebrated Cook "Pelletier," aided by experienced assistants, will still continue to be his right hand man.

The office and books will be under the charge of Mr. GEORGE P BURNHAM, late the able editor of the "Daily Ohio Union," of Cincinnati, and more recently of Boston. In short, great exertions have been made, and hereafter will not be spared, to render "The Franklin" one of the VERY FIRST hotels for comfort, convenience, and good living. D. K. MINOR.

Philadelphia, Jan. 1, 1847.—1t

I. T. GRANT & CO.'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hopes to be enabled hereafter to supply promptly the rapidly increasing demand for that article. These mills have been repeatedly tried, and the principle upon which they operate thoroughly examined and tested by committees appointed by the State Agricultural Society, and in every instance have been declared greatly superior to any that have come in competition with them. They have taken the *first premium* at four of the New-York State Agricultural Fairs, (being all at which they have been exhibited.) and at the State Fairs in Pennsylvania and Maryland. Our mills took the first premium, and we were awarded a silver medal for the new improvement, at the Fair of the American Institute in 1846, and they received the highest consideration at the great National Fair, recently held at the city of Washington. Wherever they have been exhibited, they have received the unqualified commendation of agriculturists, and are believed to be the only mills ever invented or manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle, and *smut* at the same time. They will also thoroughly clean all other kinds of grains and seeds by running it through once. We manufacture four sizes, varying in price from $21 for No. 1, to $27 for No. 4, and have no hesitation in warranting them superior to anything of the kind now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premium wherever exhibited

Our Fan Mills and Cradles are for sale at factory prices at the following places:

John Mayher & Co., 195 Front-st., New-York.
E Whitman, 55 Light-st., Baltimore;
Denslow & Webster, Savannah, Geo.;
Fitzhugh Coyle, Washington City;
Baggs & Parsons, Springfield, Mass.;
Pierce, Sweet & Co., Burlington, Vt.;
J. W. Howes, Montpelier, Vt.;
Luther Tucker, 10 and 12 Green-st., Albany, N. Y
H. Warren, Troy;
J. S. & J. Brown, Newburgh.

Orders thankfully received and promptly attended to, and all goods delivered at Troy, N. Y., free of charge.

I. T. GRANT & Co.

Junction P. O., Rens. Co., N. Y., Jan. 1.—tf

DOWNING'S WORKS.

VALUABLE WORKS, by A. J. Downing, Esq *The Fruits and Fruit Trees of America.* or the Culture, Propagation, and management of the Gardens and Orchards of Fruit Trees generally; with descriptions of all the finest varieties of fruit cultivated in the country.

1 thick vol. 12 mo., with many engravings. $1.50. Or a superior edition in large 8 vo., to match the author's other works. $2 50.

"This is the most valuable of all the books which Mr. Downing has contributed to the higher departments of our rural literature, and it is the most charming book of the season. Some idea may be formed of its completeness from the fact of its containing a list of no less than 490 sorts of apples. Mr. Downing claims the right to talk about fruits and trees from having been born in 'one of the largest gardens, and upon the banks of one of the noblest rivers in America;' everybody will concede the right since he has shown himself so competent to the task."—*Broadway Journal.*

"This is a valuable practical work, and every orchardist and every fruit-grower should possess himself of its stores of information."—*U. S. Gazette.*

A Treatise on Landscape Gardening; adapted to North America, with a view to the improvement of country residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; descriptions and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8vo. $3 50.

"This volume, the first American treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Jour.*

"Downing's Landscape Gardening is a masterly work of its kind.—more especially considering that the art is yet in its infancy in America."—*Loudon's Gardener's Magazine.*

Designs for Cottgae Residences; adapted to North America. Including Elevations and Plans of the Buildings, and designs for laying out Grounds. 1 vol. 8vo., with very neat illustrations. Second edition, revised. $2.00.

A second edition of the "Cottage Residences" is just published, as Part I.; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the interiors and furniture of cottages, as well as additional designs for farm buildings.

Gardening for Ladies; and Companion to the Flower Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing. 1 thick vol 12 mo., with engravings representing the processes of grafting, budding, layering, &c., &c. $1.25.

"A truly charming work, written with simplicity and clearness. It is decidedly the best work on the subject, and we strongly recommend it it to all our fair countrywomen, as a work they ought not to be without."—*N. Y. Courier.*

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents in a precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country.—*N. Y. Tribune.*

Published and for sale by **WILEY & PUTNAM,**
Oct. 18.—3t No. 161 Broadway, N. Y.

Messrs. W. & P. will publish shortly, *Wightwick's Hints to Young Architects.* Edited with additions, by A. J. Downing.

Also, a new edition of Lindley's Horticulture, edited by A. J. Downing, and Prof. A. Gray.

AGRICULTURAL WAREHOUSE.

183 *Front-st., New-York.*

THE subscriber offers for sale an extensive assortment of Farming and Gardening utensils, consisting in part of plows of Freeborn's, Minor's, Horton & Co.'s, Prouty & Mears', and Ruggles Nourse & Mason's patterns. The Locked Coulter, and Wrought Share Plow.

Corn Shellers, Fanning Mills, Grain Cradles. Corn and Cob Mills, Straw Cutters, of Greene's, Hovey's, Eastman's, and other most approved patterns.

Horse Powers, Threshing Machines, &c. Gin gear, Mill, Horse-power, and all other castings, constantly on hand. Also a general assortment of Brass, Copper, and Iron Wire Cloth, for Paper, Rice, and other mills. Seives, Screens, Riddles, &c., &c.

Persons ordering articles from the subscriber may depend upon having them made of the best materials and in the most workmanlike manner.

JOHN MOORE.

New-York, Oct. 1, 1846—6t

AMERICAN HERD BOOK.

CONTAINING pedigrees of Short Horn cattle, to which is prefixed a concise history of English and American Short-Horns, compiled from the best authorities; by LEWIS F. ALLEN. This valuable book contains the pedigrees of about six hundred cattle, and it should be in the hands of every breeder of Short-Horns. A few copies for sale at the OFFICE of the CULTIVATOR.

Oct. 1.

WIRE CLOTH SIEVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. **D. L. CLAWSON.**
July, 1846—10 mos. 191 Water-st, New-York.

P. S.—All kinds of wire work manufactured to order.

NOTICE.

THE undersigned expects to return from his journeyings in the southern states about the 1st February next, when he hopes to be fully prepared to meet and fill all orders in his line, particularly for his "Warren Horse Powers and Threshers," now so much and perfectly improved, his "Hand Threshers," and the "Trimble Horse Powers," and the Endless Chain Horse Powers—also for the "Platt's Improved Portable Burr Stone Mills,"—together with Ploughs, Castings, Corn-Shellers, &c., &c In the mean time, however, all orders will be promptly attended to, as usual.

JAS. PLANT, 5 Burling slip, N. Y. City.

Nov. 1—3t.

KENDALL'S CYLINDER CHURNS.

THE following in relation to the above churns, from a firm in Vermont, who purchase of us, will show in what estimation the cylinder churns are held.

"We wrote you a few days since, to forward three each of the two smallest size churns. Please send us immediately six each of three sizes. Churns are getting in good demand. Our people think there is quite a saving when they can fetch the butter in two minutes, instead of churning two hours with the old fashioned churn. The Kendall churn is getting to be all the go."

The above churns are always for sale at wholesale or retail, at the Albany Agricultural Warehouse, Nos. 10 and 12 Green-st.

LUTHER TUCKER.

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by E. K. COLLINS & Co., 56 South-st.

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano.

Sept, 1, 1846.—tf

"SANFORD'S PATENT STRAW CUTTERS."

THE subscriber has just received a quantity of these superior machines, made in a superior manner. A few also for Cutting Stalks. JAS. PLANT, Sole Agent,
Dec. 1—2t. No. 5 Burling Slip, N. Y. City.

WILD TURKEYS.

FOR sale, two pair of wild turkeys—one pair of which were sent from Illinois in the fall of 1844, and the others were reared from them the present year. They are well domesticated, and are splendid birds. Price, $10 per pair. Inquire at the OFFICE OF THE CULTIVATOR.

Dec. 1—2t.

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 and 52 North Market-Street, Boston.

FOR sale at this establishment, a general assortment of Agricultural and Garden Implements—Howard's Improved Patent Cast Iron Plows of all sizes. Martin's improved Eagle and other Plows; Double Mould Board, Side-Hill, Paring, and other plows, in great variety, and of the most approved patterns. Howard's Subsoil Plows, Cultivators of different descriptions; Willis' Seed Sower, (the best in use;) Geddes' and other Harrows of various patterns; Green's Straw-Cutters, Willis' Straw-Cutters, of various kinds and prices; Gault's Patent Churns, Grindstones or Friction Rollers; Cast Iron Field Rollers, (a very superior and substantial article;) Garden Rollers of cast-iron, different sizes, Iron Rakes of every size and variety; Garden Trowels, Syringes in great variety; Pruning and Budding Knives; Pruning Scissors, and Shears in great variety; Grass Hooks and Garden Shears; Garden and Field Hoes of every pattern; Scufflers every size; Pick Axes, Shovels, Spades, Dung and Garden Forks of every description; Hay Tools, including the very best Scythes manufactured in the country, (in all cases warranted;) Hall's and other Hay Rakes, Pitch-forks, Grain Cradles, Horse Rakes, Sickles, Austin's Rifles, Whet Stones, &c., &c.

Also a complete assortment of Chains, viz:—Fence Chains—Trace do.—Ox do.—Dog do.—Tie-up do. Hale's Horse Power; Hale's Threshing Machine and Winnowing Mills, Garden Engines, &c.

Also Axes, Hatchets, Bill Hooks, Hammers; Axe, Hoe, and Rake Handles; Ox Yokes, Bull Rings; together with every other article important for Agricultural or Horticultural purposes.

Harris' Paint Mill, the best in use, is also for sale at this establishment.

SEEDS, TREES, AND PLANTS.

The subscribers are enabled to furnish seeds of the purest quality, of every variety of field, vegetable, and flower seed; embracing every variety desirable far cultivation.

Also, Fruit, Forest, and Ornamental Trees and Shrubs, of every description.

Also Hardy Herbaceous Plants; Roses, embracing 500 of the best varieties; Bulbous Roots in great variety. Green-House Plants, Grape Vines, &c.

☞ Orders promptly attended to. **JOSEPH BRECK & Co.**

Boston, Sept. 1—tf.

ALBANY AGRICULTURAL WAREHOUSE,

AND

FIELD AND GARDEN SEED STORE.

Nos. 10 AND 12, GREEN-ST., ALBANY.

THE Subscriber having become the proprietor of the stock and trade of the Albany Agricultural Warehouse, recently carried on by the firm of E. Comstock & Co., has removed the establishment to the spacious stores Nos. 10 and 12 Green-street, (four doors from State-street, and near the center of the city,) where he has made such arrangements as will enable him to offer for sale a most complete assortment of the most approved

Agricultural Implements, Machines, Tools, &c.,

together with every variety of

Field, Garden, and Flower Seeds,

all of which will be sold on as reasonable terms as at any establishment in the country.

Among the assortment of that most important implement, the Plow, may be found a great variety of the celebrated

Eagle, Side-Hill, Subsoil, and other Plows,

from the manufactory of Ruggles. Nourse & Mason, of Worcester, Mass. Also, as large an assortment of the noted

Center-Draft, Side-Hill, Subsoil, and other Plows,

from the manufactory of Prouty & Mears, of Boston. The plows from both these establishments are extensively known and highly approved by all who have used them. Both kinds will be sold at the manufacturer's home prices.

A general assortment of other Plows, (among them Delano's Diamond,) adapted to different soils and modes of culture, constantly on hand.

Langdon's Cultivator Plow, Bement's Improved, and common Horse Cultivators.

Lewis' Patent Seed Planter, manufactured expressly for the subscriber, and which is believed to be best in use—price $15.

Bachelder's Patent Horse Corn Planter, capable of planting from six to ten acres a day—price, $15.

English Brush Drill Barrow, for small seeds, —price $12—with extra hopper for Corn, Beans, Peas, &c., for hills or drills, $15.

Geddes' Improved Harrows, five sizes—from $3 to $15. Also, Folding and A. Harrows, various sizes and manufacture.

Hovey's Patent Spiral Straw Cutter, for hand-power, five sizes, from $10 to $25. Rigged for horse-power, $1 to $2 extra.

Also, Steven's Spiral Hay and Cornstalk Cutter, ten sizes, from $8 to $20—rigged for horse power, $1 to $2 extra.

Grant's Celebrated Fan Mills, the best in use, four sizes, $21 to $27. Also Elliott's Fanning Mills, for small seeds, from $10 to $12.

Burrall's Hand Corn Sheller and Separator, a new and very compact machine, one of the very best in use Also Clinton's Hand Corn Sheller, which shells very rapidly, but does not separate the corn and cob, a cheap and durable machine.

An extensive assortment of Harvesting and Haying Tools, such as Revolving and Hand Rakes, Grant's Cradles, Scythes, Snathes, Hay Forks, of the most approved kinds, Quinnebaug and Cummington Scythe Stones, Rifles, Sickels, &c., &c.

Manure Forks, Shovels, Spades, and Hoes, by the dozen or single, from the best manufactories in the country.

Root and Vegetable Cutters, several kinds, including one suitable for cutting for sheep, the best machine for the purpose in use.

Wheelbarrows, of different sizes and kinds. Contractors and dealers furnished on liberal terms.

A good assortment of Dairy Furniture, as Churns of various kinds, including Kendall's Cylinder, five sizes, from $2 to $5, the most approved churn in use—also Gault's, Dash, and others. Tubs, Pails, Butter Ladles and Workers, &c., &c.

Ox Yokes and Bows, Draft, Trace, Stake, Halter, and, Tie-up Chains, Ox-Balls, Horse and Cattle Cords, Brushes, Currycombs, Bar-Pins, a new article, &c., &c.

Grass, Field, Garden, Herb, and Flower Seed in great variety, both of foreign and domestic growth.

Jewett's Improved Dutton Corn, and other choice varieties. Hall's Early June, Carter, and other Potatoes, together with every article usually kept in such establishments, to all of which the attention of the public is respectfully invited.

LUTHER TUCKER.

Albany, Jan., 1847.

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THE CULTIVATOR

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BOSTON—Joseph Breck & Co., 52 North-Market-Street;
PHILADELPHIA—G. B. Zieber & Co., Booksellers:

Of whom single numbers, or complete sets of the back volumes, can always be obtained.

☞ Two editions of The Cultivator are issued—one without covers and unstitched, which, by the decision of the Postmaster General, is subject to *newspaper postage* only—the other, stitched in printed covers, the postage of which would be 3½ cents per number. The covered edition is never sent by mail, except particularly requested.

☞ ADVERTISEMENTS inserted in the Cultivator, at the rate of $1.00 per 100 words, for each insertion.

FARMER WANTED.

WANTED a man with his wife, (one without children would be preferred,) to take charge of a farm of about 200 acres, in one of the pleasantest districts in New-England. The wages would be good and the situation probably a permanent one. Address, (*post-paid*,) box No. 1668, Post Office, Boston.

Jan. 1—2t.

ALBANY AG. WAREHOUSE.

DISSOLUTION.—The co-partnership heretofore existing between the subscribers, under the firm of E. COMSTOCK & Co., is this day by mutual consent dissolved. The affairs of the firm will be settled, and the business continued by LUTHER TUCKER.

Albany, Sept. 9, 1844.

ELON COMSTOCK.
LUTHER TUCKER.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, FEBRUARY, 1847. No. 2.

SKETCHES OF MASSACHUSETTS FARMING.

FROM our last number we continue our notices of the cattle of Massachusetts.

We have before alluded, (Cultivator, vol. VII., page 134, and vol. II., new series, p. 75,) to a spirited and systematic attempt, commenced several years since, by Col. JAQUES, of the Ten Hills Farm, near Boston, to establish a superior breed of cattle for the dairy. Though much, certainly, has been done by Col. J. towards the accomplishment of his object, his success would undoubtedly have been more complete, had all circumstances favored his operations. He has produced many valuable animals, and the excellent qualities of his "*Cream-Pot*" cows, seem to be acknowledged wherever they have been known. He still keeps a few animals of this stock. His bull Cassius, (five years old,) is not often excelled in external points, and we have no doubt that he possesses very valuable qualities. His color, like that of the Cream-Pots generally, is bright red, with a yellow skin. He unites the blood of some of the best animals Col. J. has ever bred, viz., that of the noted bull Don, (his sire,) and the celebrated cows Cypress and Coral, (his dam and grandam.) Coral has been for some time owned by Mr. GEORGE ADAMS, of Somerville. From a statement of Mr. A.'s, published in the *Massachusetts Plowman*, Feb. 15th, 1845, it appears that he kept fifty cows; that he took a particular account of Coral's milk from Feb. 1st, 1844, to May 1st, same year, being three months; and that she *averaged twenty-three quarts* [beer measure] of strained milk per day: that he sold the milk which was given by this cow in ninety days, for $103.50! Mr. A. considers her the most valuable cow he ever owned.

Col. J. has of late years sold most of the stock he has bred, at a very early age—generally while calves or yearlings; and the prices he has obtained, have averaged $100 per head. Several have been sold within the last four or five years, at $150, and some for $200 each. But his farm has lately become too valuable for other purposes, (fortunately for him,) to justify its being much devoted to rearing stock. It is estimated to be worth $1,000 per acre, for the clay it contains. It consists of 150 acres.

In 1845, the Trustees of the Massachusetts Society for Promoting Agriculture, imported four cows and a bull, of the Ayrshire breed, and a bull and the same number of cows of the Devon breed. They had previously, in 1835, we think, imported an Ayrshire cow and bull. On the farm of ELIAS PHINNEY, Esq., of Lexington, we saw the animals of the late importation, with their produce since their arrival. The old Ayrshire cow first imported, and several which the Trustees purchased at Capt. RANDALL's late sale, were likewise here, as was also the Ayrshire cow "Medal," purchased by Mr. LAWSON, of Lowell, at Capt. R.'s sale. Several of the Ayrshires appear to be fine cows; especially "Medal," the old cow (now seventeen years old) above mentioned, "Jeannie Deans," and "Flora Macdonald."—the two latter of the late importation.

The Devons appear to be well bred stock. Two of the cows were very much to our fancy, being well made, beautifully limbed, and mellow skinned, with very fair indications of dairy qualities. The Devon bull, we thought a very superior one, though he was in poor condition, from sickness. Mr. PHINNEY supposed his disease to be bronchitis, and he feared that it would prove fatal. We should regard the death of such an animal as a great public loss. Should he live, we hope his use will be permitted in some of the districts where oxen are considerably reared; and we will venture the opinion that his progeny, from the best formed and proper sized cows, will prove to be of high excellence for the yoke. We noticed several Devon bull calves, of fine form and thrifty appearance; in fact, we thought all the Devons, with one exception, indicated a great tendency to fatten.

The Ayrshire bull which the Trustees of the Agricultural Society first imported, has been kept in different parts of the state. He was for one or more seasons in Berkshire county, and has since been at different places along Connecticut river. His progeny are held in high estimation as dairy stock. We have met with several persons who have tried them, and they invariably speak very favorably in regard to their value. Mr. HENRY STRONG, of Northampton, has a cow of this stock, six years old, which is one of the best cows we have ever met with. She calved last season the first of April. Towards the latter part of the season, he was induced, supposing her milk was of very rich quality, to put hor on trial for butter. He accordingly kept an accurate account of the butter made from her, from the 1st of September to the eleventh of November, and it *averaged* eleven pounds per week, by actual weight.

The late ISAAC C. BATES, of Northampton, (formerly U. S. Senator from Massachusetts,) purchased, several years since, the Hereford bull "Sir Isaac," which was sent from England by Admiral COFFIN, in 1824, as a present to the Mass. Soc. for Promoting Agriculture. This bull was kept till he was quite old by Mr. B., and from his son, Mr. S. H. BATES, (who now has charge of the farm,) and other persons in the neighborhood, we learned some facts in regard to the success of the Hereford cross. Mr. B. states, and Mr. STRONG concurred in the same statement, that for all purposes *combined*, they were the best stock ever kept in the neighborhood. Their chief excellencies were for beef and work, and in these qualities they are said to have been much superior to any other cattle which have been known there. Their strength was great, and their quickness and speed as travellers remarkable. As to dairy qualities, Mr. B. states, that though the cows did not yield as large a quantity of milk as some, it was of so rich a quality, that in quantity of butter they were seldom exceeded. Mr. **Cook**, of Northampton, who has been in the practice of stall-feeding cattle for many years, frequently fatted the half-blood Herefords; and after several trials with them, was so convinced of their superiority, both in the rapidity with which they acquired fat, and in the quality of their beef, that he would pay several dollars more for lean animals of this blood, than for others of the same size. Mr. **Sargeant**, of Springfield, and others, also spoke of the beef of this stock as being of better quality and flavor than any other they had ever seen. Mr. **Bates** has now two fine cows and a heifer, descendants of "Sir Isaac," which show strong marks of Hereford blood. But as Mr. B. has devoted his farm chiefly to sheep, he has discontinued the breeding of cattle, and keeps only cows enough to supply milk for domestic use.

From all we can learn, we are confident that the introduction of this Hereford bull was of great advantage to the section where he was kept; and we have no doubt that similar advantages would be derived there and in other good grazing districts of Massachusetts, by the use of prime bulls of the same breed.

Mr. **Horatio Sargeant**, of Springfield, has a herd of good stock. Among them we noticed a full-blood Durham bull, of fine points, and several full-blood cows which appear to be superior milkers. Also, some very handsome young steers and heifers.

Before closing this part of our subject, we wish to offer a friendly remark. Some of our brother farmers of Massachusetts should be more particular in regard to the blood of their stock. They are too inattentive to the real qualities of their animals, and in reference to their improvement, do not take hold of the matter as if they intended to understand it. In several instances bulls were shown to us as "Durhams" which evidently had not more than one-third or one-eighth of that blood, and were very miserable hard-fleshed animals besides. And we presume that the unfavorable opinions which we found prevailing in many places in regard to the Durham breed of cattle, is in a great degree attributable to the bad selections of bulls which have been made.

Farms, Dairies, &c.—The farm of **Elias Phinney, Esq.**, in Lexington, is noted for the good management it evinces, and for its general productiveness. He has a very fine and productive orchard, and has done much in reclaiming and rendering profitable, wet and marshy lands. But we were, unfortunately, so limited as to time, that we could but just glance at the arrangements, and must defer more particular remarks till we are favored with an opportunity (which we hope to enjoy,) of making a second visit.

Mr. **John Hammond**, of Worcester, has a farm of 122 acres, which for neatness, productiveness, and good management, is not exceeded by any we have met with in any part of the country. About fifteen acres of the farm are in wood. He keeps about forty head of cattle, and besides affording pasturage for them, he cuts from 80 to 100 tons of hay per year. He usually has about twenty-five cows, and has sold seventeen hundred dollars worth of milk in a year, at five cents per quart. [We may as well remark here, that milk is sold in Massachusetts by *beer measure*, which is one-fifth *more* than wine measure.] Besides this, he has sold from his farm five hundred dollars worth of other produce in a year. His buildings and fences are in complete order. His barn is one of the best and most convenient we have seen. It is 90 feet long, 42 feet wide, and posts 18 feet high. The width is divided into three parts—a floor-way of twelve feet through the centre, and a bay and cattle stable of fifteen feet each, on the sides. It has a cellar under the whole, into which the manure and urine descends, and where loam and other materials are frequently spread on the heap.

We shall probably have occasion, hereafter, to speak more particularly of the advantages of barns constructed on plans similar to this; but cannot omit to mention here, an improvement which has been adopted by Mr. **Abiel Jaques**, who has a beautiful farm, with good barn and other buildings, in Worcester. Where barns have cellars under them, considerable inconvenience is often experienced in getting the cattle from the cellar and yard into the stalls above. This inconvenience is in a great measure obviated by the contrivance alluded to. An inclined way is constructed at a low angle in the back part of the cellar, connecting at the upper end with the apartment in which the cattle are tied. A door at the connection of this way with the floor, prevents the cattle from ascending into the barn except when it is opened. The way is simply solid earth, supported and kept in place by stone-work at its sides and upper end.

In Barre and New Braintree there are some capital farms. The face of the country is rough and hilly, and the soil in many instances very rocky; yet it is made highly productive, especially for grass. The farmers are generally in very independent circumstances, and have no occasion to sigh for other climes. By well-directed and persevering industry, the "rough places" have been "made smooth," and the rugged features of the landscape have been even wrought into ornaments of beauty. The rocks and stones which originally occupied so much of the soil, have been removed, and formed into massive stone-walls, by which the farms are divided into beautiful fields.

In Barre, we called at three farms, lying contiguously, which, for the completeness of the buildings and other fixtures, and general "good looks," are hardly surpassed by any other three farms similarly situated within our knowledge. They belong respectively to Mr. **David Kendall**, **David Lee**, Esq., and Mr. **Harrison Bacon**.

We first called on Mr. **Lee**, who kindly accompanied us to other farms in the vicinity, and afforded us other facilities, for which he has our thanks. His farm now consists of about 200 acres, though it was formerly much larger. He has made great improvements by clearing the land of stones, with which it naturally so abounded that it was almost impossible to plow it. A good portion of the farm has been divided into lots of ten to fifteen acres each. In many of them, the stones have been thoroughly taken out, so that the plow will run with as little interruption as on the western prairies; but to get the stones out of the way, the walls into which they have been put, are in several instances so wide that a carriage might be driven on the top of them! These lands now produce an average of two and a half tons of hay per acre; and fifty bushels of corn to the acre is quite common. Of oats, Mr. L. has obtained over eighty bushels per acre.

Mr. L's barn is said to be the largest in the state, with the exception of the "Boylston barn," in Princeton. It is 108 feet long, 44 feet wide, with posts 20 feet high. It has two floors, and the hay, &c., is carried in on the upper floor. It has a cellar under the whole. And we will here observe that all farmers with whom we conversed, who have had any experience with barn-cellars, state that the manure which is kept in them, is worth from fifty to a hundred per cent. more than that which is exposed in the ordinary way.

This section of country is quite noted for its cheese dairies.[*] Mr. Lee has formerly carried on the business of making cheese on a large scale. He has taken from the Massachusetts State Ag. Society, and the Worcester County Society, $500 in premiums on that article.

Mr. Bacon keeps about forty cows, and makes a large quantity of cheese annually. He milked thirty-six cows the last season, and they produced twenty thousand pounds of cheese, or an average of five hundred and fifty-five pounds to each cow. It sold at eight cents per pound, which gives as the income from each cow, $44.40.

But Mr. Bacon's cows are a superior lot, and have been selected with a good deal of care; though we have no doubt that the same attention which he has bestowed, may be given in most other cases with equally good results. Several of Mr. B.'s cows were procured from Mr. Elias Ayres, who lately removed from Barre to Virginia. Mr. A. took great pains with his stock, particularly in reference to their milking qualities. Statements in regard to the quantity of milk yielded by his cows have several times appeared in some of the papers of Massachusetts. At a trial which Mr. Bacon made last season, it was ascertained that ten of his cows gave from twenty to twenty-five quarts of milk per day, beer measure. Some of these cows are from a fourth to half-blood Durham, and are really very fine animals.

It may be remarked as we pass, that many of the farmers of Massachusetts are aware of the great difference there is in cows, and are beginning to appreciate the value of a good one. For instance, in some of the dairy districts, ordinary cows are considered worth from $20 to $25, and good ones from $50 to 75. Mr. Bacon considers many of his cows worth each from $65 to $70. The prevalence of correct ideas on this subject will be likely to do great good by inducing the farmers to pay more attention to the blood and qualities of their stock, and will ultimately be the means of getting rid of the numerous horde that will not pay for their keeping.

New Braintree is likewise famous for its cheese. Capt. Hollis Tidd, of this town, has formerly kept a large number of cows, and manufactured cheese extensively; but of late years he has not carried on the business so largely. He took the $100 premium of the State Ag. Society, for *old* cheese, in 1831, and if all his cheese is of a similar quality to some we tasted at his table, we should not be surprised at its taking premiums on any occasion, whoever might be his competitors.

Our stay in this neighborhood was necessarily too short to admit of our visiting many of the farms. We however called for a few minutes at Mr. Josiah Gleason's. We were in so much haste that we had not time to gather many particulars; but we saw enough to convince us that it was one of the most perfect establishments it has ever been our good fortune to meet with. Everything about the premises—house, barn, and other buildings—bore the impress of ORDER AND NEATNESS, which, in our opinion, should constitute every farmer's motto. There was "a place for everything, and everything in its place." The long lines of stone walls were perfectly straight, and appeared to be as firmly built as though they had been designed to protect a city. Rows of beautiful trees of the sugar-maple, lined the wide and handsome road for the whole length of the farm. The home farm consists of 234 acres, and there are 100 acres in out-lands. The stock consists of fifty head of cattle, chiefly cows, sixty sheep, and several horses.

There are many other fine farms in the neighborhood which we regretted not having an opportunity to examine; particularly those of Col. Mixter, Mr. Green, and Mr. Elbridge Gleason.

IMPROVEMENT IN LUMBER WAGONS.

An improvement has been made in England in the construction of lumber wagons, within a few years, and adopted already to a considerable extent, which we believe would be well worthy the attention of our mechanics. It is made with a view to admit of wide boxes, at the same time that the wagon itself may be turned at a short angle. This, every farmer knows, is often of great importance, in confined parts of farm-yards, narrow lanes, roads, and elsewhere, especially with heavy loads, when the usual expedient of running backward and forward a few times, to throw the vehicle about, is out of the question.

The usual point of turning, it is well known, is at the king-bolt, or large iron bolt through the centre of the forward axletree. If the box is wide, the inner fore wheel strikes the side, on even a slight inclination from the right-line. The improvement consists in placing the turning point further behind, at the point *a*, fig. 13, which represents a horizontal outline of the wagon, the dotted lines showing the position of the box. In turning, as shown in fig. 14, one wheel is thrown forward, and passes round the end of the box, while the other is thrown further off, and consequently does not strike the box, unless bent round to nearly a right angle. The dotted lines show the position of the forward axle when straight, the distance from *b* to *c* being about the distance that the inner wheel is thrown off by the turning motion.

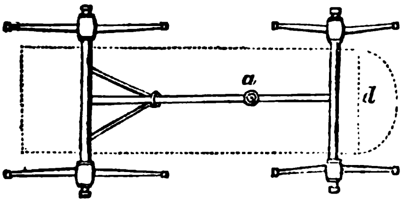

Fig. 13.

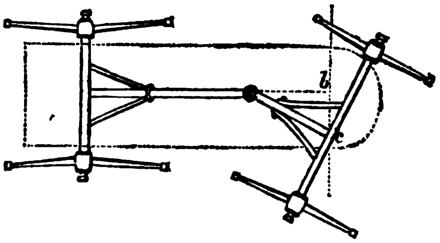

Fig. 14.

The forward end of the box is usually made semi-circular, but it may be made square, as shown by one of the dotted lines in fig. 19, at *d*.

These figures are merely intended to show the *principle* of this improvement, which we believe well worthy the attention of our agricultural mechanics. T.

Draining.—Imperfect underdraining is very common. A writer in the Hillsborough Gazette, gives the following good rule:—If water stands on the surface of a field three hours after rain has ceased to fall, that field is not sufficiently drained for the cultivation of grains.

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[*] Since the above was written, we have received a copy of the Transactions of the Agricultural Society of Worcester County, for 1846. In the report of one of the committees, it is stated that according to the statistical returns of the state, the income derived from cows in Worcester county, "is one quarter of the whole amount of the income of cows in the state, and more than double the amount of any other county except Middlesex"—that "the capital employed in this branch of farming business in the county cannot be less than one million of dollars"—and that "there are but two branches of agricultural, and nine of mechanical industry in the Commonwealth, that yield a greater income than that derived from the cow."

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

FARMING IN HOLLAND

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Utrecht, Holland, Nov. 20, 1846.

MESSRS. EDITORS—I find the season here so far advanced, that comparatively little is to be learned of practical agriculture, and I have, therefore, as yet, made no excursions into the surrounding country, that is, nothing more than short walks. My ride from Antwerp to Utrecht was rather interesting, as enabling me to see a wide extent of Dutch cultivation, and I will give you a sketch of those things which chiefly arrested my attention.

Antwerp is not at a very great distance from the Dutch frontier. The border land between Holland and Belgium, is a wide desolate looking tract of sandy moor, for the greater part entirely neglected. There was, however, in many places, a considerable thickness of organic matter above the sand, which would go far towards making an excellent soil. In some places I saw holes, where a substance resembling marl or clay had been raised to the surface, and laid in heaps. Were it either marl or clay, it would be highly useful on such light sandy soils. Great improvements are commencing here, and some flourishing looking farms begin to appear amidst the surrounding desolation.

The Crown Prince, I hear, has large possessions on these moors, and energetically promotes and encourages everything promising to advance cultivation there.

I was not able to ascertain, except by a hasty glance in passing, the system upon which these improvements proceed. Each one of the fields was enclosed by an open ditch, that indispensable accompaniment of a Dutch farm. In many cases, the turf, bushes, &c., &c., were burned, being collected in heaps; and the ashes afterwards spread over the whole surface.

After passing Grootrunslert, the first town in Holland, we entered a fine agricultural district. The crops were all thriving, and the fields bore evidence of careful and laborious attention. This district, North Brabant, seems to be all drained as thoroughly as the nature of the case will admit. The summer level of the water is generally not more than 18 inches or 2 feet below the surface, and there is scarcely any fall; in the winter the whole country is frequently covered with water for months. The houses placed on slight elevations, and the roads on embankments, are alone visible. Such was the case in January of the present year, when I passed through this very district. These circumstances all united, render it necessary to make the drains large and open, thereby interfering of course to a considerable degree with economical cultivation. These ditches become grown up and choaked with weeds every year; in all directions we saw men cleaning them with a species of rakes, drawing the vegetable masses brought up directly into boats, or forming heaps on the land. These cleanings of the ditches must form an important item in the Dutch farmer's list of available and effective manures. In some places I have seen men dipping up the black liquid from the bottoms of the canals, and laying it up in heaps on the banks. This mud, from its black appearance, must be rich in vegetable decomposing matter, and very well fitted to form compost heaps, or even to spread directly upon the land, after a winter's exposure to frost and warmth alternately. The large ditches on almost every farm, form a kind of canal, navigable by boats, carrying several tons; in these, manure is often carried from one part of the farm to another, and the products of the various fields brought home. On some of the farms, horses would scarcely be necessary except for plowing. Farm vehicles seemed very few in number, and those few awkward in shape, especially the wagons, with high and narrow bodies, greatly elevated from the ground, and rising at both ends. From the forward axletree, a stick three or four feet long, turns upwards, and curls over towards the front board of the wagon box; this is generally terminated by a brass knob, which, in well regulated establishments, is kept scoured to a great degree of brightness. I had no opportunity of seeing any of the farming implements. I expect to find the Dutch far behind in this respect.

About half way between Antwerp and Utrecht, we passed through Breda, a large and very strongly fortified town. It is entirely surrounded by low, marshy ground, and in winter the water in the ditches is nearly on a level with the streets. After leaving this place, we came to a broad tract of rich, fertile land, partly a rather stiff clay, but afterwards becoming a fine light loam in appearance. Both of these kinds of soils appeared to be of great depth. The draining was as perfect as possible under the circumstances, and as I have described above; the water standing from eight to eighteen inches below the surface. The crops on the whole of this tract were remarkably luxuriant. Of course we could say nothing as to the grain crops, but the grass and the turneps particularly arrested our attention. The turneps seem universally to be sown broadcast, and are not thinned out; and the consequence is a great mass of leaves and stalks. How large the roots were we had no opportunity of judging. A large farmer, living in the neighborhood of Breda, rode with us some miles, and gave us much information as to his own farm and the practices of the country. I think the Dutch farmers and proprietors in general, can hardly equal this gentleman, who spoke French, German, and Italian, and read English with ease. The learning of foreign languages is, however, in so small a country as Holland, a matter of necessity to any one who ever goes a hundred miles from home.

We learned from this gentleman that in his section, at least, the Dutch are very deficient as to rotation of crops; in fact they have no rotation at all; they take as many successive crops of grain as they choose, or as they can. The land there is so good that this system may be carried on for a long time; but in many sections of the country I should think that they would be driven to a different course.

As I am only now about half way in my journey, I will stop for the present, and give you the conclusion at another time. Yours very truly, JOHN P. NORTON.

NOTES OF A TRAVELLER IN ENGLAND—No. II.

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PLOWING.—The neatness and perfection with which the plowing is usually performed in England, is remarkable, and invariably attracts the attention of the traveller. The furrow-slice is much narrower than that usually seen in America; from nine to ten inches I found to be the usual breadth. Great care is taken that the furrow should not only be of the same breadth, but also equal care is taken that it should be of exactly uniform depth. The depth of the furrow is generally two-thirds of the breadth, and this enables the plowman to lay all his furrows in the proper position, and with surprising uniformity. In plowing greensward, I found that the depth of the furrow was generally six inches by nine in breadth. The difference between good and bad plowing is very readily perceived after the grain is up. The furrow slices should be straight, of equal breadth and thickness, for unless this is carefully attended to, the ground will not be equally prepared for the reception of the seed; and that inequality, which is often observable in a field of grain, frequently arises from this inaccuracy. I seldom saw a crooked furrow, though I passed through more than twenty counties, and paid particular attention to the plowed fields in every part of the country. The head lands are finished with equal care and accuracy as the rest of the land.

In many parts of the country the land is plowed in ridges, which vary much in breadth. They are raised in the middle, and the open furrows at the sides serve as drains to let off the surplus waters. These ridges on retentive soils, are deemed indispensible, but on some of the lighter soils their utility seemed to me at least doubtful. In some parts of the country, they are used to enable the plowman to perform his work with accuracy; but it is believed that for this purpose it will not much longer be retained.

From a careful examination of the land after it was prepared for crops, I became satisfied that the narrow furrow slice is much to be preferred. The soil is completely and uniformly pulverized, and this, in connexion with draining, is one of the most effectual means of increasing the product of the soil. And when the perfection of the subsequent preparation, as mentioned in my former communication, is considered, it is apparent that the farmer may well ask from Him who makes the corn to grow, to add his blessing to the labor of his hands, having himself done all he could to secure the desired return. The large yield which is most generally obtained, shows that the system here pursued, is at least worthy of consideration, as the preparation of the land by the plowman has an important bearing upon the subsequent crop. Indeed, it has been well said,—"that the whole value of plowing, scientifically speaking, depends upon its having the effect of loosening the texture of the soil, and thus permitting a free circulation of air and moisture through the furrows, for the double purpose of increasing the rapidity of the disintegration of its stony portions, and of re-reducing to powder what had once been pulverized, but which, from the joint action of pressure, and the binding effect of root fibres, had been united together. However well land may be manured, and however thoroughly drained, you never can obtain the crops it is capable of yielding unless you pulverize it.

There are a great variety of plows in use here, yet I think several of the improved plows in America are equal to any I have seen. I have no doubt we have some plowmen, also, who may do their work with equal care and acuracy. It is not however, considered with us as indispensible to good farming, to have the land plowed with so much care. The most that can be accomplished in a given time, is generally considered more important *than the manner* in which it is performed. The plow is most generally here drawn by three or four horses in single file, with one or more drivers, though the practice of using two horses abreast, as with us, is evidently gaining favor, and will, I should think, ere long supersede almost entirely the other method. Reforms in this country are very slow, and it may take much longer time than I imagine to accomplish this. Oxen are but little used in plowing in those sections of the country through which I passed.

It is often said that we cannot expect to have our farms as neatly and carefully worked as they are here. The wages of the laborer are so much higher, and the prices of produce so much lower, that we cannot afford it. This is doubtless true to a certain extent, but I do not perceive that it is a valid objection to the adoption of a more perfect system of plowing. The increased crop resulting from it, will, in almost every instance, amply repay for any additional labor and expense that may be required to prepare the ground.

Sheep and Mutton.—The excellency of their mutton is the pride and boast of every Englishman, and from its almost universal use, it appears to be the national meat, rather than their famed roast beef. Until I tasted Welsh, South Down and Leicester mutton, in all their richness of flavor, as served up in London, I confess I knew not the value of mutton as an article of food. I soon became very partial to it, as I believe most Americans do who taste it here. The fatness of the sheep brought to market is truly surprising, and no one except those who occasionally see the rich mutton fattened in Albany and its vicinity, and some other localities, can have any conception of it. In passing through the country early in May, I saw multitudes of sheep feeding from early green crops, inclosed usually in hurdles on the fields, so as to secure the manure, and these removed as required, until the whole field is consumed, or the sheep ready for market. Turneps also are used to a considerable extent, as well as oil-cake, in the fattening of sheep.

The sheep are never taken to market, so far as my observation extends, except when in the very best condition. Indeed I never saw in the markets in England, what would be considered a lean carcass of mutton.

The breeds of sheep above mentioned, are those most esteemed for mutton. The small Welsh mutton is the finest flavor of any I ever tasted, and it commands, I believe, uniformly, the highest price in market. The quantity of this variety is small compared with the others. The Downs and Leicesters, and a cross between them, are the next, though the Cotswold and some others command nearly as high prices. The quantity of mutton consumed in London alone is enormous. From 30 to 45,000 sheep are weekly sold in Smithfield market, and a very large number of slaughtered carcasses are brought up to the dead meat markets from all parts of the kingdom.

How far it may be desirable to encourage these breeds of sheep for mutton with us, it is not for me to say. The prices with us bear little comparison with those usually obtained in England. The common price in London last spring and summer, was, from three and six pence to four and six pence, sterling, the stone of eight pounds, averaging about twelve cents the pound. My own impression is, that in the vicinity of our large towns, these sheep might be reared and fattened at a profit, and I presume those who have engaged in it, have generally made it profitable. At all events, if we are to have mutton, let us endeavor to have the best breeds, well fattened, and then we shall know how to prize this delicious, and I believe, most healthy meat.

RESULTS OF CHEMICAL INVESTIGATIONS.

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Giessen, *Nov.* 10, 1846.

Messrs. Tucker and Howard—In my letter of July last, I gave Dr. **Krocker**'s determinations of ammonia, in a variety of soils. They were in beautiful confirmation of Liebig's views, but far outstripping his expressed anticipations, so far as *quantity* was concerned. A recent experiment has shown that if aqua ammonia be poured upon a funnell filled with fine clay, the filtrate is simple water! all the ammonia remains with the alumina. Here is a comprehensible explanation of one of the known advantages of an aluminous soil. Another has been brought to light in the course of last summer, going still farther to explain the value of this kind of soil for the growth of grains. It is the presence of *phosphate of alumina* in vastly greater profusion than was formerly supposed, or revealed by analysis. It is as yet unpublished. *Soluble silica*, which gives to the straw its strength, more or less in quantity, is also a characteristic of this soil.

The clays owe their origin to the decomposition of feldspathic rocks. How this decomposition was effected, was, until within a short time, altogether in the dark. Light has been shed upon it by the labors of analysis, in porcelain manufactories, and ere long no doubt will rest upon the whole natural process.

The feldspars are silicate of alumina and alkalies. A certain per centage of the silicate of potash or soda is first dissolved in water or carbonated water, and flows out, leaving behind a mineral richer in alumina, and also in silica, in proportion to the potash, than before. Mere carbonated water removes more potash and silica, leaving even a purer and purer alumina behind. This is the clay. The degree of purity, and its quality for pottery and other purposes, depend upon the meteorological character of its situation.

We are still at the commencement of the solution of many great questions deeply interesting to the farmer; our supplies of potash, bye-and-bye, are to come from *where?*—and of soluble silica, from *where?*—and of phosphates, from *where?* These questions, chemistry, with the aid of a generous agricultural people, will answer in time—and she will answer simply and satisfactorily too, the perhaps equally difficult ones presenting themselves on every side—of our people engaged in mining and manufactures. I trust American chemists will be given to share in the labor.

In my departure from Europe, I leave one American in Berlin, one in Freiberg, one in Utrecht, and three in Giessen, all devoted to chemistry. The Berlin and Freiburg students will come to Giessen after a time, to close their course with the great master. When all these shall have completed their studies and returned to the new world, to co-operate with those already in the field, I see no reason why we should doubt America's future instrumentality in the advancement of this department of science.

There has never been a year of the Giessen school so fruitful in the development of new and weighty truths in chemistry as that now drawing to a close; and the next edition of Liebig's Animal Chemistry, will, if I do not greatly mistake, startle the scientific world more profoundly even than the first.

There are now between sixty and seventy students with Liebig and his assistant, Prof. Will, and among them not a few whose names are destined to figure in the annals of science.

In parting from my alma mater, and reflecting upon the mighty influence exerted by this school, I can not help feeling deeply the force of that remark of Bacon's, which, with a little introduction characteristic of its source, Liebig so often repeats to his pupils—"Work! work!! work!!!—and see that your labors have always something *useful* in prospect."

Very respectfully, yours, E. N. Horsford.

RURAL NOTICES ABROAD—No. II.—By Caius.

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Rome and its Environs.—The Campagna is a great rolling plain, sweeping around the city of Rome. The Tiber, a swift and turbid river, rolls through it, and washes the feet of those seven hills upon which the city was built. The hills are not high, and are now scarce discernible, amid the groups of houses and churches. Villas have been built around the city, and tracts of the Campagna have been walled in, and planted and cultivated. Some of these are ornamented with long avenues of trees—pines, and lindens, and beeches, and the walks are bordered with the richest hedges of box, that are, perhaps, to be seen in the world. Others are laid out in the English style, with sheets of water, and clumps of foliage, and irregular groups of trees. The gardens within these villa grounds, are in the highest state of cultivation, and supply not only the wants of their princely owners, but much of the produce finds its way into the ordinary markets of Rome. Vegetables of nearly every kind, grow luxuriantly in these gardens; the fruits, saving a few of a tropical character, such as figs and lemons, are neither so good nor so various as ours. Around the villas, and even within the old walls of the city, are fields devoted to public gardening, highly enriched, and yielding most abundantly. Straggling hedges are to be seen in the neighborhood of the city, but in general, the enclosures are of brick or stone. Vineyards are upon the sunny slopes of the elevations about Rome, but no wine of extraordinary flavor is made in its vicinity, nor are the grapes in any way remarkable. They are cultivated as in France, upon stakes, of from three to four feet in height, and are set at about the same number of feet from each other. The stiff formal tops of the olive orchards appear here and there, but are mostly to be seen upon the slopes of the mountains beyond the Campagna.

The spade is the almost universal implement of culture in the neighborhood of Rome, and I remember seeing a company of forty laborers engaged in spading a ten acre field of tough green sward, just outside the walls. The work was necessarily slow, but most effectively performed. The implement itself is clumsy, as are all of Roman handicraft. The heavy duties prevent the importation of foreign improvements, and the Roman cultivators are nearly a half century behind the age. Even the chairs at Rome are all made by hand, and there is a street in the city, where, on a sunny day, may be seen the workers upon chairs, seated on the pavements, shaving out the rounds, one by one. The common wheelrights are as unprovided; and a little wood and iron, with an axe and auger, make up their stock in trade. Laborers may be found for all ordinary work, at from fifteen to twenty cents a day, and they will hire, even in the city, for ten cents a day. The commoner sorts of wine, from the mountains, may be bought for two cents the pint, and a laborer wishes only beside, a *bouillon*, (soup,) and a plate of maccaroni, with perhaps a sour orange. In the morning, he gets his *caffe latto*, (coffee with milk,) and a roll of brown bread, for two cents: sometimes he will take a fried supper in the open air at one of the stalls which are scattered over the city, but oftener he goes to his straw without it.

The markets are well supplied with mutton, from the plains and mountains, and with beef that fed upon Campagna, in winter, and upon the slopes of the Albanian hills in summer. No where is more economy observed in meat-cutting, and it would puzzle a naturalist to detect a portion which does not come sooner or later to the fry-pan. Lambs' brains are among the delicacies of a Roman epicure. There is little offal to a Roman butchery. Large herds of swine feed over the morasses, in the forests stretching down by the coasts, twenty or thirty miles from Rome; and among them troop along the heavy moulded, scraggy-looking buffaloes. These have rough, curling, coarse hair, their horns droop like those of some of the Scotch breeds; their color varies from brown to black; they have a wild, red eye, yet not unfrequently are seen broken in to the yoke, and lying beside their clumsy carts in the Roman forum. The oxen, however, which are relied upon for the market, are a large, deep-chested, well-formed, light grey beast, with enormous horns, (spreading from three to four feet,) and are said to have sprung from that famous breed of white cattle, which history and romance alike assign to the beautiful valley of Clitumnus. Hence Macaulay, in his lay—

"No more along Clitumnus
Grazes the milk-white steer."

They have not the square butcher make of the Herefords, or Durhams, but taking into view their soft, fine-haired skins, their large, black, intelligent eyes, and their branching horns, I have never seen handsomer cattle in any part of Europe. The beef is by no means highly fed, and as a consequence, is not of very superior quality. The pork at Rome is decidedly inferior, while that in Naples is unsurpassed for delicacy and flavor, by any in the world. Wild boar's meat, makes its appearance frequently in the market, and when cooked with the rich sauces of the country, is highly esteemed.

The native horses are wild and shaggy, but strong, and possess great powers of endurance. In winter one may see the herdsmen scouring over the plains, in rough sheep-skin coats, and mounted upon the wild, shaggy horses. In that season, the sheep upon the Campagna are numbered by hundreds of thousands, and groups of the grey oxen are feeding here and there over the waving surface. Five hundred thousand acres of such waving land stretch around the walls of Rome, and make up the old Agro Romano. This is divided by ditches or imaginary lines into vast farms, of from 1000 to 10,000 acres, and until within a very short time there was a single one of 20,000, which rented for the sum of $30,000 a year. These are owned by residents—in many instances, Princes of Rome. In but very few instances do the owners pay any particular attention to the management of their lands. The larger farms are leased for a term varying from 10 to 50 years, to *fattore* or *mercante*, who furnish the capital necessary to work them. By far the larger portion of the lands, however, are rented upon the *mezzeria* system—almost precisely like the system of farming "upon shares," common to the landholders of New England. The owner furnishes capital, the lessee furnishes implements and labor, and the profits are divided. Yet, strange to say, many a poor farmer (*fattore*) taking upon such terms, a thousand acres of the Campagna, rich as prairie land, and within a half day's walk of the city of Rome, can scarce make a livelihood! Let us see what difficulties lie in his way.

WESTERN FARMING.

We have seen in several papers, some articles purporting to be from "Dr. Elliott's Letters," in relation to Western Farming. We know not where or when these letters first appeared, neither have we any other knowledge of the writer than what we gather from the published articles alluded to; but we think our readers will be interested in the following synopsis of some of the items which we condense from an exchange paper.

Winter Pasture on the Prairies.—We think that some people, who have flattered themselves with the idea of making fortunes by wool-growing in the west, expected to derive great advantage from grazing their sheep on the prairies in the winter season; but we have seen enough of prairie grass to satisfy us that after it is killed by frost it can afford but trifling support to any animal. This agrees with what Dr. Elliot says: "The prairie pasture answers the purpose until the frosts set in, and after this it is useless, as it dries up and has no substance in it for nourishment more than the worst straw."

Sheep in Illinois.—Messrs. Brown & Smith, at Island Grove, "half way between Springfield and Jacksonville," (Ill.,) are said to conduct their farming business on an extensive scale, each having about 1,400 acres under fence, and cultivated in grain and grasses. Each keeps a flock of about 1,400 sheep, and each cultivates from 400 to 600 acres of corn annually.

"Their sheep are pastured part of the year on the open prairies, where they are attended by shepherds. They are fed in the winter on hay, corn fodder, and corn, for the most part. Corn is found to be as good food for sheep on the prairie farms as any other. And corn fodder is believed by these enterprising farmers to be better than hay. The earlier their lambs come in the year, they consider the better; as those lambed in January and February they find to be much better than those of March or April. The early lambs can be weaned much earlier than the late ones, and are therefore stronger to endure the ensuing winter. In short, they consider the early lambs more than 25 per cent. better than the late ones; as they make larger sheep, and good, strong breeders for the next year."

This practice of having lambs dropped in January and February, it should be remembered, is "adapted to the meridian of southern Illinois" rather than New-York and New-England.

Big Farms.—An extensive farmer of Morgan Co., (Ill.,) by the name of Stron, is said to have "seven thousand and two hundred acres enclosed and under cultivation, in grain and the grasses. He thinks the blue grass does not suit the prairies, on account of their richness and other reasons." Timothy with clover is preferred for hay; but clover is chosen for pasture.

"Some of his fields," it is said, "exceed a thousand acres. He purchases young cattle in great numbers, and has continually on hand fat cattle for the market. He also owns several farms of from three hundred to one thousand acres, in different parts of the country, where he grazes and feeds his cattle. Perhaps he occupied more land as a grazier, than any man in Europe or America."

The following very sensible conclusions, particularly the closing sentence, we would recommend to the attention and consideration of all farmers:

"After all, those huge farms may not be so profitable, according to the investment. Mr. Stron told us that three hundred and twenty acres was enough for any man, and Mr. Smith informed us that six hundred and forty was as much as any one ought to cultivate. Yet there are thousands of farmers with far less ground who live happier and enjoy life better than those that cultivate the large farms."

Raising Roots.—William Garbutt, of Wheatland, whose great and uniform success amply shows his skill, says, in the Genesee Farmer, "The principal art of raising roots is to make the ground rich and well pulverized; and fall is much the best time to do it. Apply 40 or 50 wagon loads of well-rotted manure; 5 bushels of plaster; and 5 to 10 bushels of ashes per acre; spread them evenly over the surface, and plow 7 or 8 inches deep, and narrow furrow it not over 10 inches wide. In the spring, harrow or cultivate thoroughly, until the ground is well pulverized and the manure well mixed through it. Be sure to plant early, before the ground gets too dry to germinate the seed."

REMARKS ON THE POTATO ROT.

MESSRS. EDITORS—Although the subject of the potato rot has been dwelt upon through the press, and in almost every other way, until it seems to be pretty well made "threadbare,"—though many have given it up that *it is*, and therefore must continue to be,—it still appears to us to be a subject on which something can be said and done, and that, peradventure, some course may yet be found out and adopted, whereby its ravages may be checked, if they cannot be wholly stopped.

When a new disease breaks out in a country and community, the first object of the skilful physician is, to note it in all its qualities and peculiar bearings upon the patient. He invariably finds some more liable to attacks from all such diseases than others, and if the disease becomes prevalent, he finds that different management is necessary among his various patients, in order to obtain power over their disorders, according to the nature and character of the attack, or the constitutional predisposition of the invalid to baffle or encourage the workings of the malady.

Now we premise that this is just the way in which the farmer should manage all ailments which may arise, not only in his herds and flocks, but in the productions of his tillage. They are all subject to disease, and often, as has been the case with the potato, to new diseases.

In the remarks we have to offer on the potato disease of the last year, we shall aim at accuracy. Yet we do not suppose that the result of our observation will correspond with that of everybody else, for, as we have said before, disorders of the same name operate under different forms, as circumstances vary. That it will prove so in this, will not be marvellous.

We remark, then, firstly, on the general character of the season. Our winter, a staid and healthy old fellow, even for New England, where winters always wait to hear the first song of the spring birds, and gather the earliest flowers that come to usher in the floral year, though it gave us more than one hundred days of sleighing, was in unusual haste to hie him away to where the cold ice seas of the north would greet him with more congenial salutations, than those that whistled their melodies along our hill sides, so that the labors of the field were commenced at a much earlier date than usual. Planting, which is usually done from the 10th to the 25th of May, was much of it finished in April, a month which, though it brought some fine showers, was not remarkable for a very liberal abundance of rain; May, too, was much dryer than Mays are apt to be, and somewhat too cool to aid the early springing of the crops into anything like precocious luxuriance, and June, sweet month of beauty and melody, closed up the clouds with the hand of parsimony, so that the farmer, as he looked upon his meadows, saw with saddened countenance, that fears might well occupy his mind that a season of dearth awaited his flocks and herds. Perhaps the rains of these two months would have been sufficient for the cravings of vegetation, had they fallen gently and been of longer continuance, rather than falling in powerful showers, and flowing off the earth rather than penetrating it. Indeed, they were in most cases followed with high, cold winds, calculated to disperse the surface moisture, insomuch that it was a common observation, "how soon the ground gets dry after the rains." Let us note here the general effect of such rains and the after winds, is, to form a crust on urface of many lands, especially such as are in- to clay, whereby they in a great measure lose ermeability to air and moisture, and which also prevents the evaporation of gases which may be injurious to vegetation if it contains them.

In July the atmosphere was more humid, and the rains more gentle, so that their influence on vegetation, especially grass, operated entirely to change the face of it, and the farmer who did not hurry his labor in the meadow, found an increased burthen as the reward of his patience.

Potatoes did not appear to suffer for moisture in any part of the season, other than that the quantity in the hill was diminished from former years, as might well be supposed would be the case under the circumstances.

The first intimation we had of the appearance of the rot, was on one of the last days of July. The crop affected was growing on a tract of land from which the earth had been removed in building the *Western railroad*, to fill, or raise an embankment through the swamp, whose qualities as a *sinking* fund concern, were so celebrated during the operation, consequently nothing but the subsoil or hardpan remained. This had been improved by good tillage, and manuring with unfermented manures, for, perhaps, three years. The location rather low, and in proximity to swampy lands, subject to heavy fogs. It was the only instance we heard of until about the 10th of August, when a return of lowering weather, attended by southerly winds, came on. The complaint of the striking of the disease was heard from every quarter. Many farmers immediately adopted the experiment of mowing the tops, a labor which in most cases proved unavailing. In its progress, it was, however, clearly to be seen that lands inclining to coldness and humidity, and such as had the appearance of *sour soils*, were the first to be affected.

The weather cleared off in a day or two, and the northwest breezes seemed to check, if not stop its progress. About the middle of the month, another cloudy turn, accompanied with some rain, and south wind, came on, and it again commenced its ravages. One farmer informed us that he examined his field and dug potatoes in it on Saturday, and no symptom of the disease was to be found. The wind came south that night, and was followed with rain, and on Monday or Tuesday he examined it again, and he did not believe there was a potato but what was affected. The result at harvest time I have not heard. From the middle of August the weather became more serene, and we heard no more of the rot.

As regards our own crop;—we plowed the latter part of April. The soil a slaty loam. Land had been in pasture for twelve or fourteen years, and had no manure of any kind except what was left on it by the stock feeding. Plowed eight inches deep, thoroughly harrowed, furrowed, and potatoes planted in the furrows. No vegetable or animal manure was used, except two small loads, spread on one corner, and harrowed in. After the potatoes were dropped, (planted about the 20th of May,) a table spoonful of plaster was thrown in each hill. They were hoed twice, and the hills but slightly raised. When the disease gave evidence of its existence in our neighborhood, we went to them scythe in hand, and found that in some parts of the field it gave evidence of its existence there. In mowing the tops we designed to give the experiment a fair trial. Accordingly, in doing it, we left rows, parts of rows, and squares of four to sixteen hills each, in various parts of the field, uncut, and waited the result.

We remark here, that at this time, the ground gave no evidence of moisture, down to the bottom of the hill. The atmosphere was cloudy, with occasional mists, and oppressively warm; wind southerly. The ground was also very warm; unnaturally so, for, on thrusting the hand into the earth forming the hill, was like putting it in hot ashes—a dry, scorching heat.

The vines which were not mown, dried up in a week or two, and the potatoes were dug from the twentieth to the twenty-fifth of September. The result was, that in the part mown, where no evidence of the disease existed, there were no rotten ones. Where it gave slight appearances of its existence at mowing, very few, probably not one bushel in twenty, were diseased. Where they were not mown at all, from one-fourth to one-third were rotten. Such were the results of our experience. That others may bring contradictory statements is very probable; but those will not alter the facts that we have seen, and yet, from different circumstances, their statements may be true.

Many have objected to mowing the tops, because it will stop the growth of the tuber. It does undoubtedly retard it, not wholly stop its growth. So does the rot, if it remains of long continuance. One farmer told us, that he mowed a part of his, but those in the hills not mown, grew so much larger, that they more than balanced the loss of those that decayed.

Then again, in the matter of their starting a new crop where they are mown; they may or may not; ours remained in the ground more than a month, and gave no intimation of sending up new vines. Yet in other cases they may do so. We are fully convinced that if mowing will save them, it must be done before the disease strikes them, or very quick after. How beneficial it may be in such cases we can not say. We know what it *has* done for ours.

Various experiments were tried by different persons, and in different locations, to get around the evil, a few of which we subjoin. One farmer tried ashes and plaster, mixed in equal quantities, in the hill, and then, in adjoining rows, ashes alone,—and in another part of the field, plaster alone, and in some he manured with unfermented farm-yard manure. When the disease came on, he mowed half the piece, mowing two rows and leaving two. The result was, as he says, that his crop was an entire failure, not getting more than fifteen bushels where he ought to have had one hundred. He saw no difference in effect in the several causes proposed.

Another says, he went on to a remote part of his farm, and plowed and planted an old piece of pasture land, that had never submitted to the plow or received any manure, except such as came by accident, and he had no rot in his crop.

In canvassing the general information that has come to our reach, we must conclude that crops planted on light porous soils, or stimulated by hot, exciting manures, fared altogether the best.

That the disease is produced by some atmospheric quality, aided by a predisposing influence in the soil, to us appears more than ever conclusive. (We carefully examined the stems for the worm, but he was not there, and gave no evidence of having been there, and as for the insect preying on the leaf, so far as we examined, the leaves were more perfect than in the previous year, 1845, when there was but little or no rot.) The same may be said with regard to the rust on wheat. Every farmer knows, or may, if he will notice the fact, that wheat, and indeed, other grains, are often struck with blight, while fields near by do not experience any of its influence. We once saw this fact illustrated in two fields not more than four rods apart, where in one the straw was perfectly bright at harvest time, while in the other, the rust was so manifest that its effects could be seen a great distance. Yet the latter field was tilled with as much care as the former, but the soil and exposure were different even in that short distance. But the wheat crop is not abandoned because exposed to rust. Farmers have learned to manage the crop so as in a great measure to avoid its influence; and we have but little doubt, but by perseverance and close observation, (such as the physician must pursue in order to baffle new diseases,) the potato plague will eventually be in a great measure overcome. At least we fondly hope, and are willing to pursue our labors in the hope, that such may be the case.

But the potato has not been the only sufferer by the plague the last season. Here, as in other places, its influence has been seen on the tomato, carrot, and, indeed, that or something like, on some varieties of fruit. Plums gave abundant evidence of its existence, and perished of a dry rot on the trees in great numbers. Apples, in some locations, had the plague spot indelibly marked on them, and their disposition to rot in the fall, and so far this winter, is remarked by almost every one. And so with other fruits. WILLIAM BACON.

Richmond, Mass., Jan., 1847.

EDITORS CULTIVATOR—For the last two seasons I have escaped the potato rot, which has been quite general around me. I am not quite sure that the course of treatment which I have pursued, would, on different soils and in different seasons, produce the same result; but as no evil can result from the practice which I have adopted, and as I cannot attribute my escape from the rot to any other cause, I give you the facts to dispose of, as you may think best.

In the fall of 1844, my potatoes were for the first time considerably injured by the rot; in consequence of which, I read with care every article on the subject which came in my way. One writer stated that he planted his potatoes quite early in the season, and that his crop in the fall was sound and good, while those of his neighbors, which were planted later in the season, suffered very much from the rot. On reading this article, I resolved to pursue a similar course the next season. Accordingly, in the spring of 1845, I planted my potatoes the first of May, which was about two weeks earlier than my usual time of planting. They were hoed only once, and were ripe and dug in September, when the ground was dry, all sound and good, and they continued so.

In the spring of 1846, the ground being dry, it was made ready, and the potatoes planted the 10th and 11th days of April. They were hoed only once, and were ripe in August, but not dug until September. When dug the ground was dry—the potatoes came out clean, and as sound as any I ever raised, and at this time there is no appearance of disease among them.

The soil on which the potatoes grew, both in 1845 and 1846, was muck. The potatoes were of three kinds, viz: White, Flesh-color, and Neshannock.

The seasons, both 1845 and 1846, were unusually dry. Most of my neighbors have suffered severely from the rot for the last three years.

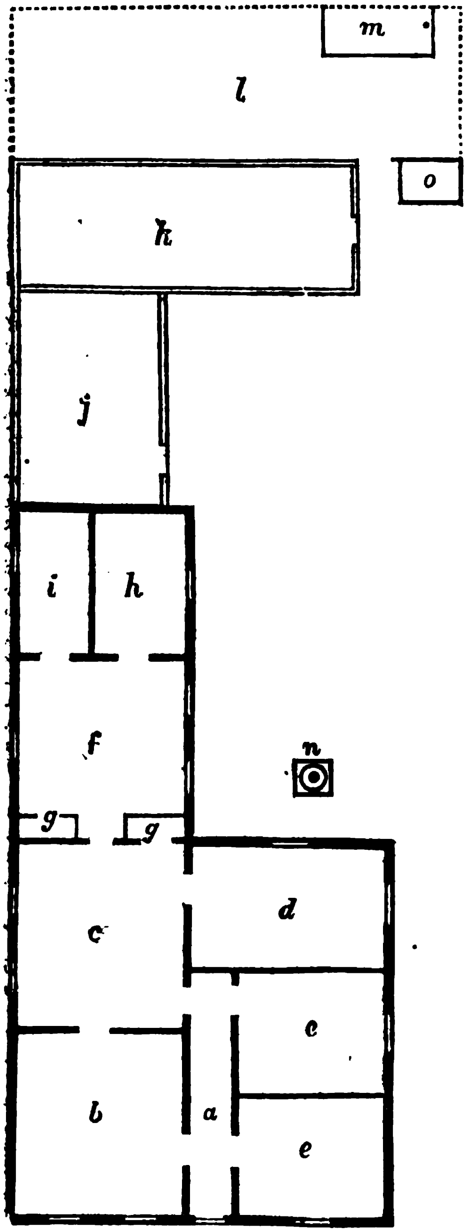
About the middle of May, last past, I planted a small patch of potatoes for the purpose of experiment, in contrast with those planted early in the season. The soil in which these were planted was gravelly clay. They were left in the ground until the 10th of Nov., then dug and found to be diseased, but not rotten. Purple spots were to be seen on nearly half of them. They were laid in a cellar, and in about two weeks were found to be rotting badly.

I give these facts hoping that it may induce others the next season to try experiments by planting both early and late, on the same and on different kinds of soil. Yours respectfully, J. HORSFORD.

Moscow, N. Y., 1846.

PLAN OF A FARM HOUSE.

Eds. Cultivator—A request of mine in a former number, that some one would furnish a plan for a cottage, having all the rooms on one floor, has been gratified in your Dec. number, by your correspondent "Zea," of Montreal.



His plan strikes me very favorably, as combining nearly all the conveniences that any family can reasonably desire. Its dimensions are rather large for ordinary families, but of course can be reduced, and the apartments somewhat varied to suit the circumstances and particular wants of any family. Let the exterior be finished in the gothic style, or only with a neat balustrade, and it may in truth be termed an elegant residence.

Cottages of this general construction I consider eminently fitted to the business of farmers' families, and I would like to see them greatly multiplied through the country. For the purpose of adding to the variety of plans, which are sent for insertion in the Cultivator, I send you one which may suit the taste of some, premising that if built of wood, it should stand two feet above ground, and have a cellar underneath. The house is supposed to face the south.

Explanation.—*a*, hall; *b*, parlor; *c*, dining and family room; *d*, family bed room; *e*, *e*, bed rooms; *f*, kitchen; *g*, *g*, closets; *h*, bed room; *i*, pantry; *j*, woodhouse; *k*, carriage-house and horse barn; *l*, barn-yard; *m*, barn; *n*, well; *o*, hog pen.

In the above plan I have purposely omitted giving the dimensions of the house, and the several rooms, for the reason that any one can build according to his means, and the size of his family. A cottage and its appurtenances in this vicinity, constructed much after the above plan, having an attic surrounded by a balustrade, has excited much attention, and elicited the remarks of hundreds as to its elegance, cheapness and convenience. H. A. P

Buffalo, Jan., 1847,

A REMEDY FOR THE BLACK WEEVIL

Eds. Cultivator—I see by the last number of the Cultivator, that Mr. Clark Rich, of Shoreham, Vt., has been trying many experiments without success, to remove or destroy the black weevil, which is so destructive to grain, and so troublesome in mills, granaries, and barns.

They are likewise very destructive to rice. I will furnish the public through the medium of your estimable publication, a remedy which has thus far stood the test of experience; hoping that you may deem it worthy of insertion. I have never failed after repeated experiments, for many years; and have been frequently amused, particularly in witnessing its effects in a cask of rice, when it was almost destroyed by weevil.

It is wonderful to see with what expedition they will leave it when the remedy is applied.

The great advantage of this remedy over others, is, that it does not in the least degree injure the grain, and also, it is so simple and easy, that almost every person has it in his possession.

It is simply sassafras (*Lanous*) root, placed among the grain, and in places infested with them. I have never had the opportunity of putting it in a stack of grain at time of stacking, but have no doubt if it be well mixed with the grain, it would keep out many other kinds of insects that are so injurious.

It is a well known fact that no kind of insect likes the smell of sassafras.

The same root is useful about poultry houses, and I find that poultry in the habit of roosting on poles made of the tree, are not liable to get lousy.

Yours respectfully, John H. King.

Georgetown, D. C.. Dec. 23, 1846.

Railroads Benefit Farmers.—Fifty four tons of poultry were sent over the Boston and Providence railroad on a single day.

FENCES—DIFFERENT KINDS.

What shall we do for fencing materials? is an inquiry which is frequently made, and in many parts of the country, the expense of obtaining such materials, and of forming and supporting fences, constitutes a heavy bill in the outgoes of the farmer.

It has been suggested that iron might be used in some sections, with as much if not more economy than any other material. A correspondent with the signature of "**Tiller**," from New Jersey, writes—

"I have been thinking over in my own mind, whether an iron wire fence would not be cheaper and far more durable than any of the ordinary fences now in use; and after much calculation as to the relative cost of the various descriptions of rails, have arrived at the conclusion, that one made of wire, (No. 7 or No. 8,) would have the advantage. According to my estimate—allowing the wire to cost 8 cents per pound—a panel of 10 feet, with five rails, will cost about 30 cents—whereas, the rough rail of cedar, or chestnut, with but four rails to the panel, will cost from 32 to 36 cents—in both cases exclusive of posts. The posts for a wire fence are the least expensive, inasmuch as the labour of making holes with a post-axe is supplanted by the more expeditious method of boring with a three-eighths or half-inch auger."

We are unable to present a comparative view of the expense of fences of iron-wire compared with those of wood, of various descriptions. If any of our correspondents have had any experience on this subject, we should be glad to hear from them. If any one has constructed fences of this kind, we should feel obliged if he will state the cost --the kind of posts used, how far apart placed, the size of the wire used, the mode of stretching it, and how secured—the height of the fence, the number of wires to each length or pannel, and the kind of stock against which the fence is intended as a barrier.

We learn by the agricultural publications of England and Scotland, that wire fences are becoming considerably used in those countries. We have lately received a pamphlet from Messrs. W. & C. **Young**, manufacturers of iron and wire work, Edinburgh and Glasgow, giving neat cuts and descriptions of various kinds of fences, gates, &c., with the cost of erection. The following extract from their list of prices may be useful:—

Iron and wire fence 3 feet 6 inches high, having wrought iron straining posts 1 3-8 inch square, every 75 yards, complete with screwed eye-bolts and nuts for straining the wires, and wrought-iron intermediate uprights, 1½ by ¼ iron, every 8 feet, having 6 horizontal wires:—

For horses, cattle and sheep, of	No. 4 wire,	1s. 2d.	per lineal yard.
For cattle and sheep,	No. 5 wire,	1s. 1d.	"
For do	No. 6 wire,	1s.	"
For sheep,	No. 7 wire,	11d.	"
For do.	No. 8 wire,	10d.	"

Same fences for wood uprights, 6 horizontal wires, including staples:

For cattle and horses, of	No. 4 wire,	7d.	per lineal yard.
For cattle and sheep,	No. 5 wire,	6d.	"
For cattle and sheep,	No. 6 wire,	5d.	"
For sheep,	No 7 wire,	4d.	"

If to include one wrought-iron straining pillar for every 75 yards, complete with screwed eye-bolts. and nuts for straining the wires, 1d. per yard extra. These are the prices of materials "delivered free at Leith, Glasgow, Liverpool, and Hull"—printed instructions, illustrated by wood cuts, accompanying each order, by which any laborer can readily erect the fences.

According to the above prices, a fence designed for cattle and sheep, three and a half feet high, with six horizontal wires, would cost, if of No. 5 wire, about $1.50 per rod; if of No. 6 wire, about $1.25 per rod. Or the wires for the same kind of fence, 'for wood uprights or posts, including staples for fastening the wires, about 67 cts. per rod, if of No. 5 wire, and about 55 cents per rod if of No. 6 wire. It may be as well to remark here, that No. 4 wire is a fourth of an inch in diameter, No. 8, three-sixteenths, and the other numbers regularly intermediate. What would be the cost of importing these fences we are unable to say; but could they not be manufactured at as low a cost in this country, expense of transportation, duties, &c., considered, as they could be imported? If such fences could be erected here at the prices above named, they would not be more expensive in their first cost than the fences usually constructed in many sections, while their permanence and indestructibleness would give them a decided advantage.

In our December number, Mr. W. **Penn Kinzer** spoke of a kind of fence which is coming into use in New Jersey, as follows:

"The farmers of Salem county, New-Jersey, are now partial to a kind of worm-fence, without stakes and riders; they insert an iron rod three-eighths of an inch thick, through the corners; the rod is turned at the bottom, and bent over the top rail so tight as to make the fence withstand a tempest. In this fence there is perhaps more economy than any other now in use; it occupies about half the ground taken up by a stake and rider fence. Five to six rails are sufficient for a panel, making a handsome fence, resembling a wave, at a distance."

Mr. B. W. **Cooper**, at Haddonfield, N. J., writes us in reference to Mr. **Kinzer**'s communication, "This fence is not confined to Salem County, but is gaining favor in other parts of New-Jersey. A decided improvement has been made in the mode of construction over that described by Mr. Kinzer. The iron rods (three-eights inch square is preferred,) are cut by a smith into suitable lengths, say 4½ or 5 feet, and punched near the top end to receive a key; a hole about 1½ in. deep is drilled into the stone on which the fence rests, in which the rod is inserted, and secured by running in melted lead. Holes are bored at each end of the rails, through which the rods are passed. Before placing on the top rail, put on blocks about six inches long and of sufficient thickness to elevate the rail to the top of the rod, then secure by inserting the key. I have erected about 100 panels of this kind of fence, seven rails high, which has withstood tornadoes, and to use the language of Mr. Kinzer, it is "almost indestructible." One hundred of three-eights iron, cost $5.50, and made 47 rods and 5 feet in length. Blacksmith's bill, for cutting, punching, and keys, 87½ cts."

Mr. **Kinzer**, in the comunication above-mentioned, speaks of a "neat article" of cast iron, designed to take the place of posts, which has lately been brought into notice in Pennsylvania. Will he have the goodness to inform us of the cost of such posts?

Longevity of Peach Trees.—The Genesee Farmer says, "We have just been shown a collection of various fruits, by Col. Colby, of Ogden, and among others, a fair looking natural peach, from a tree forty years old, yet healthy and productive."

MANAGEMENT OF POULTRY.

FREQUENT inquiries are made by farmers, as to the cheapest and best mode of managing poultry, and the question is not always satisfactorily answered. The most *perfect* mode is to have a fine, airy, well-lighted poultry-house, connected with an ample, well fenced yard. Hens may be also kept confined three-quarters of the day in a poultry-house only, if it is fully lighted and cleaned daily, without the addition of the yard, with a run of an hour or two in the adjacent grounds, before going to roost. The third and more common way, is to let them run at large at all times, picking up what they can find for a subsistence. Each of these modes has its advantages and objections.

1. The advantages of a house and large yard are,—the hens are perfectly provided with food, and room for exercise, and all the other comforts of life, without interfering with other parts of the premises. The disadvantages are, the cost of the house, the cost of a high, picketted, yard fence, and the land occupied where the yard is large, as it must be, to answer properly the intended purpose; besides the expense and care of providing a constant supply of food and water.

2. The advantages of a house without a yard are,—the expense of a large yard is avoided; and the intrusions of the hens elsewhere are entirely prevented, as during the short interval of their liberation each day, they pass hastily through garden or other grounds, picking up only insects, and avoiding scratching, and returning of their own accord to their resting places for the night. The objections are, the indispensable necessity of a well aired, well lighted, perfectly clean house, requiring large windows, care in ventilation, daily sweeping, and frequent white-washing internally. A constant supply of food and water must be given. This mode is also apt to cause hens to eat the fresh eggs, as well as to render them less prolific.

3. Suffering hens to run at large releases the owner from all care in feeding them. They pick up refuse matter from the kitchen and elsewhere, devour insects, and devour the seeds of various weeds growing in waste grounds and unfrequented places. But there are several objections to this mode of management, or rather, absence of management. Being compelled to pick up their own living, they often pick in the wrong place, and pilfered grain and uprooted garden seeds are the result. They often choose wrong places for roosting, as the backs of carriage seats, over saddles, and on farm tools, to the serious annoyance of the owner. Sometimes, too, a large nest of eggs is spoiled, in consequence of being located in some unknown hiding place.

Each of these three modes having its merits and disadvantages, it becomes necessary to choose between them. This choice must be made according to circumstances. Those who wish to raise poultry and eggs in large quantities for market, and those who do not regard the cost of a house and yard, and who can procure plenty of feed, should choose the first mode. The second may be adopted in villages, or where little land can be afforded, and where at the same time there is some person in the family to give nearly constant attention to their wants, to see they are well supplied with food and water, that strict cleanliness is uniformly preserved, and that the eggs are secured before they are devoured by the hens themselves. The third is more applicable to large farms, where the barn is remote from the garden, and where the carriage house, granary, tool-house, &c., may be entirely excluded from their visits, and consequent defilement. There is so much refuse matter around barns which they may pick up as food, that farmers may usually have a dozen or two of hens with scarcely any cost whatever. It will, however, be found a very great convenience, which we wish here strongly to recommend, to have a small apartment for their accommodation at nights, built as a *lean-to*, on the south side of the barn, and properly lighted with windows. If this opens to the inner part of the barn, and also to the barn-yard, they may at any time pass out to either place unrestrained; and as soon as they become accustomed to their lodgings, they will at once resort there, without any trouble, or without any danger of annoying the farmer by depositing their slime elsewhere. Where a hen-house without a yard has been built, it is often difficult to induce the hens in winter to frequent it; a difficulty which would vanish if they could pass to it freely and immediately from the barn they frequent during the day.

Hens may often be easily confined to the barn and barn-yard, by a row of short pickets set on the high tight fence which surrounds the cattle yard. T.

A FEW WORDS ABOUT LANDMARKS.

MESSRS. EDITORS—Perhaps it may be useful to the farmer, and not aside from the general object of the Cultivator, to offer a few remarks on this subject. It is not only important that land be *well cultivated*, but that the owner know definitely his limits. By strict attention to the maintenance of boundaries, much collision would be avoided, and the quiet and good feeling among neighbors, in many instances, essentially promoted.

The original corner, for instance, may have been a tree, which for some cause has been cut and removed; the stump remains awhile to mark the spot, but at length it decays, and finally every vestige of it has disappeared. The surveyor is called on to run one or more lines, with a view to ascertain the corner, which he is generally supposed able to do by adjusting his compass to the ancient bearing of the line in question. This, however, is expecting more of the magnetic needle than it is able to accomplish, or will be, so long as the laws which govern its variation are but imperfectly understood, though an approximation to accuracy can usually be obtained. An experience of more than twenty year's occasional practice in the various branches of surveying, has furnished repeated instances of the inconvenience and vexation resulting from the neglect complained of in this article.

Akin to this subject, is the mode sometimes adopted of describing land or roads as follows: Beginning *near* such a place or thing. One of the roads in a certain town is recorded thus, "Beginning *near* the sign-post of S—— H——'s tavern." Now, aside from the difficulty of ascertaining the precise location of "*near*," the said sign post has been missing for 30 or 40 years; and if coming events cast their shadows before, sign posts, I mean, of course, those where *rum* is sold, are not likely to be the most "permanent fixtures" for boundaries hereafter. I trust, Messrs. Editors, that the preservation of "the ancient landmarks" will not be thought a matter of little or no importance, but receive a share at least of that attention to which it is entitled.

G. BUTLER.

Clinton, Jan. 1, 1847.

CULTIVATION OF WHEAT.

Is there not some great defect in our general mode of wheat culture? In the early settlement of the country, when the soil was first brought into cultivation, wheat was readily produced in almost every section; but the production of this grain soon began to decline, and with the progress of population westward, it may be said the wheat region has been constantly receding in that direction. This circumstance would, long ago, have excited alarm, but for the vast extent of territory in our possession still unoccupied. The question, however, may even now excite some anxiety—Whence are the future inhabitants of our country to derive their bread, when there shall no longer remain *new land* to cultivate?

Our soil, in regard to the production of wheat, presents quite a contrast, in some respects, to that of some of the countries of Europe. There, soils which now yield bountiful harvests, have borne the same crop, at various intervals, for a thousand years or more. In our oldest districts, where cultivation was only commenced a little more than two hundred years since, the culture of wheat is mostly discontinued, and where carried on at all, yields in general but poor returns.

In view of these facts, it appears to us that we may derive some useful hints from attention to the best modes of European wheat-husbandry. In the best systems which prevail in England, for instance, there are at least two points which we think might be very advantageously adopted in this country. We mean the more perfect preparation of the soil, and the special adaptation of manures to the production of wheat.

We have been led to these remarks by the perusal of an excellent essay on the cultivation of wheat, in a late number of the *Farmer's Magazine*. In relation to the requisites for the growth of wheat, the writer observes that the plant is not one easy to cultivate, "for though it thrives in a stiff soil, it may be too hard; though it will grow in a loose sand, if properly attended to, it is easily thrown out; though it thrives in a hot summer, it may be burnt up for want of moisture; and though wet is injurious to it, it still requires, at certain seasons, considerable moisture. Indeed, it may be said to require a medium of soil, condition, and climate, to be brought to full perfection. If the soil be too poor, it is short and sickly; if it be too rich, it lodges or mildews; and no plant requires the watchful eye of the cultivator more carefully or more assiduously."

He speaks of the improvements in cultivation which have been adopted in England within a few years, and observes it was formerly thought that wheat could only be grown on strong retentive soils, but that it is now successfully cultivated on nearly all light soils as well as on strong. He says the "four-course," or alternating system of farming, "established the fact, that while the clover root was a better bed for wheat than a fallow, the sheep's treading and droppings were a much better dressing than lime or barn-yard manure; and that blowing sand could, in eight or even four years, be adapted to the production of as many bushels of wheat to the acre as the naked, open, laborious fallow, and with this difference, that on the latter there were the accumulation of two years' rent, tithes, taxes, and labor; on the former there was a stock of sheep to sell, and no labor beyond the plowing and sowing."

In this country, so far as our observation goes, no better preparation can be had for a wheat crop, than a clover-ley depastured by sheep. The action of clover on sandy soils, is to render them more compact In the language of this writer, "such is the consolidating power of the trifolia, that the very lightest soils will sometimes become so hard as [when very dry] to defy the power even of a Ransom's or a Howard's plow to penetrate."

He cites the analysis of Sprengel, by which it appears that the principal ingredient in wheat of a fixed character, is phosphorus, and observes—"when it is considered how much of that material is drained from the soil year after year, and sold off the farm, it is not surprising that we hear farmers complain of 'old going land' and 'spent soil!'"

The most suitable manure for wheat, he believes to be bones, in connection with the droppings of sheep left while feeding on the land; and where this course of culture has been adopted, he says good farmers in all parts of the kingdom have come to the unanimous conclusion that no soil is too light to grow thriving crops of wheat, if only it be properly tilled. "In the bones, the phosphorus, which is so essential to the formation of the grain, is supplied, and the urine and dung of the sheep supply the other constituents necessary for perfecting the plant in straw and grain. Many examples of the successful application of bones to wheat, it is said, might be related; and the experiments of Sir Samuel Crompton are referred to, "who has on a light and naturally poor sand, obtained most magnificent crops of wheat."

Bones are prepared for use as manure either by being crushed in mills designed for the purpose, or by being dissolved in sulphuric acid. The latter seems now to be considered, in England, the better course, and is being generally adopted. Prof. J. P. Norton, in a communication to the Cultivator for 1845, page 266, gives the following mode of preparing bones with acid: The bones are placed in a conical heap on a bed of ashes, and the acid slowly poured on. Twelve pounds of acid per bushel is the quantity applied; but previous to its use it is diluted with once or twice its bulk of water. The bones will absorb nearly the whole of the acid; the outside of the heap should then be turned inside and the whole will in a short time become soft and fit to mix with ashes for drilling or sowing.

They are sometimes applied in a liquid state, and are also used alone as top-dressing. The quantity applied per acre is from sixteen to twenty-five bushels.

The writer of the essay, of which we have been speaking above, has no confidence in the system of "dibbling and thin sowing," concerning which we have lately heard much; and though he thinks it certain that under the necessity of economy which at the present time exists, great efforts will be made to adopt it. He deems it equally certain that it will end in failure. He says—"We are in possession of a series of experiments which have been made, and the results brought to the test of the bushel and scale, which shows the dibbling system a perfect failure, and which at a future opportunity we shall give."

He is in favor of drilling, of which he thus speaks:

"The drill is the sheet-anchor of wheat sowing. The seed is deposited with the accuracy and regularity of clock-work; the quantity can be regulated to a fraction—a peck per acre; the rows are straight, parallel and regular; the depth can be adjusted to a trifle; and the whole apparatus adapted to the necessities, capabilities and circumstances of the soil and season, with the mere loosening of a screw, or the turning of a handle."

Drills, he says, are in use, which "are as perfect, both for mechanism and practical effect, as a chronometer or a steam-engine." So complete is their execution, that in sowing a twenty-acre field, when the surface is favorable, "scarcely a variation of an inch from a straight line occurs in the whole piece."

We have, on former occasions, spoken of the advantages of this system of wheat culture; and have mentioned the example of Mr. NOBLE, of Massillon, Ohio, who practices drilling extensively, and with excellent results. Some of the finest wheat crops we have ever seen, were produced on his farm by this mode. He informs us that the longer he continues this practice, the more he is in favor of it. He has constructed a drill which operates well—doing the work with precision and despatch. We believe the system of drilling wheat is worthy of general adoption, and we hope to see it speedily introduced into our principal wheat districts.

As a *protection against smut and vermin*, the writer of the essay recommends arsenic. We have formerly used this substance as a preventive of smut, but cannot say that it was found any more effective than blue vitriol or sulphate of copper; either substance will answer the purpose well, if properly used. But for protecting the seed against insects and vermin, we think it probable the arsenic would be preferable, though we cannot speak on this point from our own experience. The following is the mode of using the arsenic:

"Take to every bushel of corn [grain] one ounce of arsenic, dissolve it in one pint of water, adding half a pound of salt. Spread the corn on a level floor, and pour the liquor on the wheat, continually stirring it until the whole is wetted, or thoroughly damped. Then apply and mix quicklime until it is sufficiently dry to sow, and we will guarantee that not an ear of smut will be visible. The seed is also secure from crows and vermin; and the arsenic, so destructive to animal life, seems to have no effect of an injurious tendency on the seed wheat."

The average yield of wheat per acre, on a clover-ley, under good management, is put down at 30 bushels, and the expense of cultivation is given as follows:

	£	S.	D.
Plowing, ...	0	6	0
Sowing, ...	0	3	0
Harrowing, ...	0	1	0
Rolling, ...	0	1	6
Seed, ...	0	18	0
Weeding, ...	0	4	0
Straw for harvesting and all expenses up to marketing.			
	£1	13	6

This would give the cost per bushel 1s. 1½d., or about 26 cents. The common opinion, we believe, is that wheat is produced much cheaper in this country than it can be in England. This is at least questionable; at any rate we doubt whether many of our farmers can show that they have produced it at less expense than the above estimate shows. On the other hand, it is not improbable that with their improved modes of culture, and the greater average yield, the English farmers may have the advantage of the American on the score of cheapness; and we ought to regard this as an additional inducement for the adoption of a better system.

POUDRETTE ON INDIAN CORN.

EDS. CULTIVATOR—IN the March No. of the Cultivator, 1846, you gave an experiment, made by Mr. SHERMAN, with poudrette placed on corn in the hill; the result of which was so different from what I had supposed it would have been, judging from some experiments I had made with it upon wheat; and also from the unanimous opinion entertained by my neighbors of its value, that I determined to try whether the increased quantity of corn produced by this manure, would cost every one the same sum it did your correspondent. To do this, I selected a part of my field, an acre of ground, and manured one half of it in the hill, with five bushels of poudrette, manufactured in Philadelphia. The rows and hills were each four feet apart. The ground selected was, as near as I could judge, of the same quality; if there was any difference, it was in favor of that part not manured. The soil was a light micaceous loam, but quite thin, as you will see by the yield. It came up finely; the corn on the part that was manured, grew vigorously, keeping far ahead of the other, throughout the season, and ripening at least one week earlier. When harvested, the part that was manured, yielded thirty three baskets of ears, making 16 bushels of shelled corn, and the other half only 17 baskets, or 8 bushels—leaving me 8 bushels of sound corn to pay for the poudrette. The Dr. and Cr. account would stand thus:—

8 bushels corn at 60 cts per bush. is.......	$4.80	
Extra foddder—(there was at least double the quantity on this part that there was on the other)...........................	1.00	
		$5.80
Dr. To 5 bus. poudrette, 35c. is......	1.75	
Spreading the same,............	0.10	
Husking, hauling and shelling 8 bus. 3c.	0.24	
		2.09
Gain by using this manure (per ½ acre)		$3,71

A part of the same field, was manured, in the same manner with guano, and at the same cost per acre. One barrel of guano was mixed with two of unlixivated ashes, and the same quantity of clear sand, and spread on one and an half acres of ground. This part neither grew so well, nor did it yield so well as that along side of it, which had been manured with poudrette. Although we took great pains to sift and mix it thoroughly, yet many of the hills were killed, and some so stunted that they did not recover throughout the season.

One of my neighbors, seeing what poudrette had done for me, for two years in succession, on my wheat crop, planted some two or three acres, of as poor land as you could find any where, (in fact the soil had been entirely washed away) with what we call Canada corn, and manured it in the hill with this manure; a part he left unmanured. On the first part he had a fair crop; but, upon the other, there was not enough, I had almost said, to pay him for his seed, certainly not for his labor.

What these manures may do, when used upon soils of a more productive quality, I do not know, but I am well assured, that when used upon thin soils, this is a most valuable manure; and those of us in this neighborhood who have used it, in this manner, firmly believe that we receive the price of our labor and expenses, in the increased value of our provender alone. The coming season I shall plant my corn on soils of various degrees of fertility, and shall then test the matter more fully.

Lower Dublin, Pa., Dec. 19, 1846. PENNEPACK.

CULTURE OF MADDER—BERKSHIRE HOGS.

Mr. Luther Tucker—Agreeably to your request, I will endeavor to give, through the columns of the Cultivator, what I consider to be the best method of cultivating and preparing Madder for market.

In the first place, the land most suitable for its growth, is a deep, rich, sand loam—moist, but not wet. A light sandy or gravelly soil would not be good, neither a stiff clay. It should be planted as early in the spring as the land can be conveniently prepared. The land should be well plowed, and if not rich, should be made so with good barn yard manure or swamp earth. I plant in hills, six feet apart one way, and eight the other. The hill should be made two feet across at the base, and raised one foot high; the seed laid on, and covered about two or three inches deep. As soon as it is up, it should be carefully hoed and cleared from weeds. After it is up about a foot high, the tops fall and spread in all directions over the hill. A light coat of dirt is then thrown on, covering all except within four or five inches of the ends of the tops, which being so covered become roots, which send forth other tops and innumerable small roots from the joints of those covered up, and these form in the hill a compact mass of roots by the time it is ready to harvest. This should be repeated two or three times each season for the first three seasons. The last covering should be about the first of September. There will then be time for the tops to send forth shoots to come up early in the spring. In this way nearly the whole growth of the top is converted into roots. The fourth or last season, requires little or nothing to be done.—The reason for planting the hills further one way than the other, is to give room to drive between the rows with a team, as I generally draw on manure and put a shovel full on each hill before earthing. The labor of forming the hills for the seed, can be performed in a great measure with a plow. Earthing the hills is done by throwing on to them the earth plowed up between the hills, with a shovel or spade. This being done for three successive seasons, forms a large hill.

I commence digging about the first of Shpteember. The tops in the first place are cut off close to the root with a sharp hoe. I then plow a deep furrow around the hill, picking up what loose roots may turn out—then run a furrow through the body of the hill, shaking the dirt from the roots with a dung-fork. They are then picked apart, taken to a large vat or tub, washed, put into a kiln and thoroughly dried. I grind it in a cast iron mill, constructed upon the principle of a pepper mill. It may be ground in a grist mill to advantage, it being necessary to run slower than when grinding grain, to prevent heating. An oil mill grinds it well. It is then ready for use.

The quantity of seed to the hill can be judged of by the person planting. It takes six bushels to plant an acre. I preserve it through the winter by placing it in a heap and covering it with earth. I can furnish seed to order, from the middle of September to the first of May, boxed and delivered at Utica, for $2.50 per bushel. It will not be injured if conveyed in the winter, if buried immediately in the earth when received.

I think the rich bottom lands on rivers, that grow heavy crops of corn, would be admirably adapted to the cultivation of Madder. The amount raised to the acre, will depend in a great measure upon the goodness of the land and good culture. It is not subject to be destroyed by drouth or frost, or the multitude of enemies that assail many of the farmer's crops. J. Eaton.

West-Winfield, N. Y., Dec. 18, 1846.

[In relation to our remarks on Berkshire swine, in the October and November numbers, we advise our readers to compare them with the statements in the following communication, and see which will best "square" with their experience and observation.—Eds.]

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Messrs. Editors—In the October and November numbers of the Cultivator, I noticed some remarks on swine, a part of which do not exactly square with my notions on the subject.

I am one who suffered to some extent, by the "excitement" which was got up in relation to Berkshire hogs; and having lost by them, I am disposed, as far as I can, to save others from a like misfortune. I sustained a considerable loss, in consequence of the prices I paid; but a greater, by keeping a worthless animal for several years. Having procured this breed of swine at a large expense, I was unwilling to give it up without a thorough trial; and so I continued to breed and keep Berkshires for four or five years, and tried hard to like them.

I think the Berkshires may be good "for supplying the market with meat to eat fresh;" but at the same time, I consider them less profitable for the farmer to raise, even for this purpose, than some other breeds.

My objections to this breed of swine are not founded on their color. This is all moon-shine. If an animal will answer well the purpose for which he is kept, I care not whether he be black, white or "green."

The following are some of my objections to the Berkshires. 1. They are generally very small; though I sometimes had, perhaps, one from a litter, that at eighteen months old, would weigh from 400 to 500 pounds; while the others, at the same age, would not exceed 200 or 250 pounds. 2. I never found any "fine delicate meat for families," from them. There is no clear fat meat in the hog, and what little fat there is, is soft and oily. 3. They furnished me but very little lard. 4. I found them great eaters. I may be thought heterodox; but I had as lief rear and fatten an ordinary hog, which at eighteen months old, will weigh 400 pounds, as a Berkshire, which at the same age, will weigh but 200 pounds. And indeed, I think there is far less difference in the cost of fattening a large hog, and a small one, of any breed, than is generally supposed.

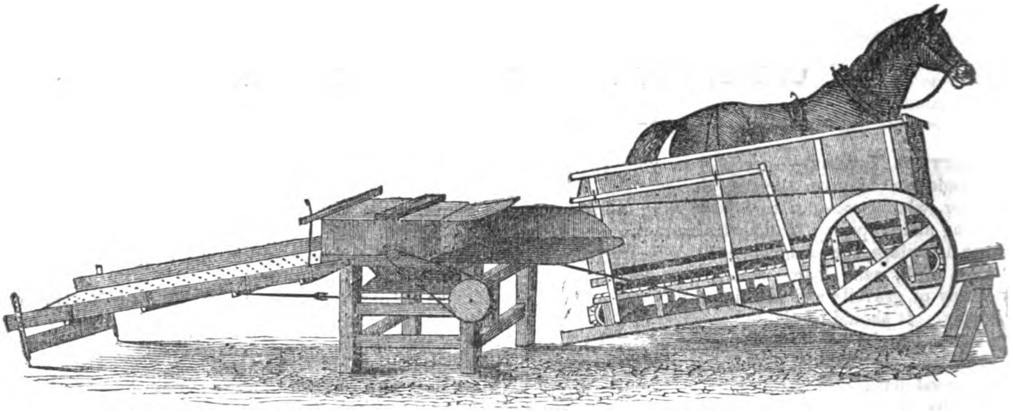
For these and other reasons, "too numerous to mention," I consider the Berkshires, the poorest breed of swine, that I have ever tried.

I have now a breed of white hogs, without a name, which I procured by several crosses, which at the same age, will weigh about twice as much as common Berkshires, and certainly not at a greater cost of keeping. At the same time, the meat is far better. These, at eighteen months old, will weigh from 400 to 500 pounds. I last spring sold six pigs, being all of a litter which lived, (a part of the litter died in a cold night) and which were dropped on the 22d of March. One of them was killed on the 29th day of October, and weighed 315 pounds. Two were killed on the 30th of November, and weighed, one 320 pounds, and the other 334 pounds. A fourth was killed on the 5th of December and weighed 317 pounds. One was purchased to keep over the winter, and from the other I have not heard. I think it would not be easy to find four Berkshires, or indeed four pigs of any other breed, which at the same age, beat these,

Respectfully yours,

Ralph R. Phelps.

Manchester, Ct., Dec. 1846.



WHEELER'S HORSE-POWER AND THRESHER.

THE advantages of this machine consist in its cheapness, portableness, and effectiveness. The cost of the whole apparatus, ready for threshing, as above delineated, is $110—or for the different parts as follows: $75 for the horse-power, $28 for the thresher, and $7 for the "shaker." It is so light that two men can readily put it on and off a wagon; but at the same time it is very strong and substantial. As above shown, is is adapted to the use of one horse, and the performance of the machine with this power, is equal to threshing one hundred bushels of wheat, or two hundred bushels of oats in a day; but to do this a change of horses should be made every three hours. It requires but little manual labor to use it; for grain in bundles, two men and a boy are sufficient. The simple contrivance called a "shaker," which in the figure is shown attached to the thresher, saves fully the work of one hand, and besides leaves the grain entirely free from straw, and so disposes of the straw that no grain is wasted.

We have lately witnessed the operation of this machine, and are of the opinion that it is capable of performing more work in proportion to the force employed, than any other with which we are acquainted. The horse-power is much liked by those who are acquainted with it. It is easily applied to various purposes, and is the kind which is mostly used for sawing wood at the different railroad stations between this city and Boston. It runs very easily; but by means of a brake, which is attached to it in a very convenient manner, its motion is at all times perfectly under the control of the person in charge of the machine; and whatever may be the speed, it can be checked as desired.

The horse-power can be readily fitted for working two horses abreast—the only alteration necessary, being to increase the width of the rotary platform on which the horse stands, and lengthen the main or driving shaft. [For particulars see advertisement.]

CULTURE AND USES OF THE CARROT.

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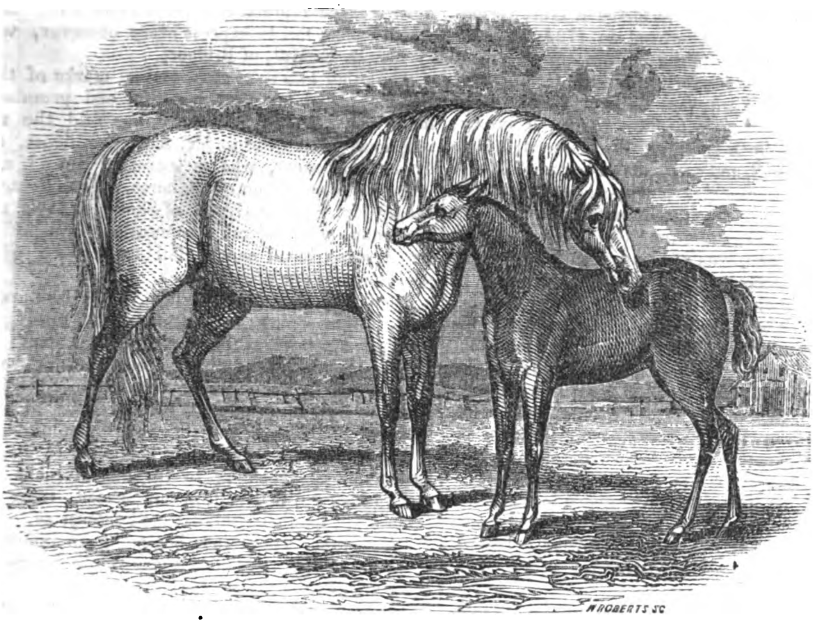
WE would thus seasonably call the attention of farmers to the advantages of the carrot crop. Whether the potato will continue to be affected with the malady which has attacked it for a few years past, is more than any one can tell. But it is best, in the language of the homely proverb, "to provide for the worst, though we hope for the best;" and on soils which are sufficiently friable, we should decidedly prefer the carrot, to grow as a substitute for the potato in feeding animals, any other vegetable. It is true the carrot has not been altogether exempt from the blight and tendency to premature decay with which several species of plants have been lately attacked; but so far as our observation has gone, the white or Belgian carrot is the only variety which has suffered to such an extent as to occasion much loss. This kind has been supposed to yield more than the orange, and other kinds, with less labor in cultivation, and we think this is the fact, where the crop remains perfectly healthy; but the white is acknowledged to be less nutritive than the others; so that with the liability to disease, and the inferior quality of the white, we should unhesitatingly recommend the orange variety.

Carrots are known to be excellent food for milch cows, and also for horses. We have formerly been in the habit of using them for the former purpose, and decidedly prefer them for making rich milk and high colored and well flavored butter, to any other food we ever used in the winter season. For horses, we know the opinion of those who have used them is highly favorable. Mr. RISLEY, of Chautauque county, raises annually great quantities of carrots, and has been the most successful competitor for premiums on this crop, of any man in the state. He has, in several instances, produced more than 1,000 bushels to the acre. We are informed that he feeds them largely to his horses. We have been lately told by a man who has been sometime in his employ, that the horses fed on carrots are more healthy and active than when fed with anything else. In his own language, the carrots will "make an old horse appear like a colt." He stated that they usually gave from a peck to a half a bushel of carrots to each horse daily, with about half the quantity of grain which is given where no carrots are allowed. Horses which have been kept on grain in the ordinary way, when put on their allowance of carrots, it is said, very quickly improve in spirit, and in the appearance of their coats; and if the labor they are required to perform is not very hard, it is preferred to give them only the allowance of carrots, with but little grain.

INCOME OF THE STATE OF NEW-YORK.—It appears by the census of 1845, that the total agricultural products of the state of New-York, together with the income of all mechanics and manufacturers, and the amount earned by the public conveyance of merchandize and travellers, amounts to $280 millions of dollars.

TO KNOW GOOD FLOUR.—Good flour, when squeezed by the hand, bears the minute marks of the fingers and skin much longer than when bad or adulterated.



"LADY MESSENGER," AND HER COLT "MORGAN MESSENGER."

The improvement of our breeds of horses for various purposes, is an object which deserves attention. Of the whole number of horses reared in the country, the proportion of good ones is very small; hence the remark is frequently made that the rearing of horses is unprofitable. But if the standard of value could be so raised that the average would be equal to that of our best, the business would yield good returns.

The origin of our most valuable horses is not only a subject of interest to the curious, but it is also one of great practical importance. Like causes produce like effects; and a course which has produced improvement, may be safely relied on for the continuance of similar results.

The animals delineated in our cut are thought to have derived their excellencies chiefly from the "Messenger" and "Morgan" blood which they possess; therefore, in introducing a notice of them, we have availed ourselves of the opportunity to offer a few remarks in regard to the history of their distinguished progenitors.

Messenger was imported by Mr. Benger, and landed at New-York in 1791. He was bred by John Pratt, Esq., of New Market, England; was foaled in 1780; by Mambrino, dam by Turf—Regulus—Starling—Fox—(dam of Snap)—Gipsey, by Bay Bolton—Duke of Newcastle's Turk—Taffolet Barb—Place's White Turk—Natural Barb mare. [*Am. Turf Register*, vol. vi., p. 105.]

As a racer, Messenger was not particularly eminent, though he won several matches when he was from four to five years old; but we have no account of his having appeared on the turf after his arrival in this country. As a stock-getter he was justly celebrated. He was the sire of Miller's Damsel, and several other noted racers; but he derived his greatest renown on account of the superiority of his progeny from common or "cold-blooded" mares, as *business* horses. As strong, long-lived, and enduring roadsters, and as fast trotters, they have seldom, if ever, been equalled.

In a letter to J. S. Skinner, Esq., (then editor of the *Am. Turf Register,*) Mr. Van Ranst, who was for several years owner of Messenger, gives the following account of him:

"Messenger when landed, was a light dapple gray, but afterwards became white. He had a large, full, black eye, remarkably brilliant. His movement and action were elegant. His standing never careless; I never saw him resting himself on three legs, but whether the ground was rough or smooth, he always stood upon it—prompt, erect, and lofty.

"Messenger was imported by Mr. Benger in 1791, and landed in this city, [New-York,] where I saw him shortly after, and my mind was fixed on his being much the best horse I had ever seen, and said nothing about price, as I was confident he was over my mark.

"Mr. Benger shortly after took him to Philadelphia, and stood him two seasons at Shamnay Bridge, not far from Bristol. After which Mr. Henry Astor, of this city, purchased and stood him two seasons on Long Island, at Philip Platt's; the next spring I bought one-third, and took him to Pine Plains, Dutchess county. After which I bought Mr. Astor out, for which I paid $2,750. I hired said horse at different stands; the farthest south was Cooper's Ferry, opposite Philadelphia, at $1000 per season, free of expenses, until the time of his death, Jan. 28, 1808, at the farm of Mr. Townsend Cock, L. I., who had hired him three seasons of the time."

By reference to the above dates it will be seen that Messenger, at the time of his death, was twenty-eight years old; and as his death occurred thirty-nine years ago, there is no probability that there is at this time any of his immediate offspring in existence. His descendants, however, even where they have only an eighth or a sixteenth of his blood, often exhibit his characteristics in a striking manner.

The origin of the valuable stock of Horses called "Morgans" has been the subject of some controversy, and in the minds of some, the question may not yet perhaps, be fully settled. We deem it not improper to say, however, that we think the following facts have been ascertained:—That the animal commonly known as the

"Old Justin Morgan horse," was foaled at West Springfield, (Mass.,) or that neighborhood, in 1793: that his sire was a horse called "True Briton, or Beautiful Bay," said to have been formerly owned by Gen. James De Lancy, of New-York, (see Cultivator, vol. ix., p. 110:) that his dam was owned by Justin Morgan; that she was got by a horse called Diamond; he by the "Church horse;" and he by the imported Wild-air.

The last named horse was much celebrated as the sire of valuable stock. He was imported by Gen. De Lancy, in 1760 or '61, and after having been used as a stallion in this country, was re-shipped to England, in 1773. In the *New-York Sporting Magazine*, vol. i., p. 5, we find the following:

"He [Wild-air] was the property [previous to his coming to this country,] of William Swinburn, and Jennison Shafto, Esquires: was foaled in 1753; by Old Cade, son of the Godolphin Arabian; his dam by Steady, a son of Flying Childers, out of the famous Miss Belvoir; his grandam by Old Partner; great grandam by Greyhound—Makeless—Counsellor—Brimmer, out of a daughter of Mr. Place's White Turk."

"True Briton, or Beautiful Bay," above mentioned,[*] was said to have been got by the imported horse Traveller, or, (as sometimes called,) Morton's Traveller. In the *American Turf Register*, vol. vi., p. 423, his pedigree is given as follows:

"Morton's Traveller, (imported,) was got by the celebrated O'Kelly's, [or English] Eclipse—King Herod—Blank—Old Cade—by the Godolphin Arabian. King Herod was by Tartar, his dam Cypron, by Blaze, a son of the Great Flying Childers. Blank was by the Godolphin Arabian."

Thus it appears that the origin of the "Justin Morgan horse," was a mixture of the Wild-air and Traveller blood with "country" mares, whose blood cannot be fully traced.

The animals from which our figures were taken, are now the property of Gen. Silas M. Burroughs, of Medina, Orleans county, N. Y. In reference to their qualities, we have the following communication.

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Messrs. Editors—I have read with interest several articles in your valuable journal relating to the Morgan horse Black Hawk, owned by Mr. Hill, of Bridport, Vermont. You will doubtless be gratified to learn that Gen. Silas M. Burroughs, of Medina, in this county, has recently procured from Vermont four colts got by Black Hawk. One, a year old last spring, bred by S. W. Jewett, Esq., of Weybridge, Vermont, out of "Lady Messenger," a descendant of the imported horse Messenger, whose stock is so justly celebrated for many valuable qualities: "Lady Messenger" is a beautiful animal, possessing the peculiar qualities of the Messenger blood in a very marked degree. I knew her when my uncle used her in his carriage, and she was the best performer on the road I ever saw. Mr. Jewett showed me the likeness of this noble animal, and the colt now owned by Gen. Burroughs. The likeness of the mare is remarkably faithful and correct.

The other three colts brought by Gen. B. from Vermont, are last spring's colts, one of which took the first premium at the Addison county fair in October last, and is the very best colt I ever saw. He has the remarkable proportions of the sire "Black Hawk," as described by Mr. Jewett, in his letter published in the Cultivator, vol. ii., (new series,) p. 196. This colt, which has the most marked expression of intelligence imaginable, and which cannot fail to impress every observer, was bred by Mr. D. E. Hill, of Bridport.

The other two colts show evident marks of the Morgan blood, and are very beautiful and promising animals. Gen. B., I am informed, has sold the two last mentioned colts—one to Mr. Andrew Ellicott, of Shelby, in this county, who is esteemed as an excellent judge and connoisseur of the horse. The other was taken by Mr. William Gilson, of Shelby, who is a skilful horseman, of considerable reputation. An infusion of the Morgan blood cannot fail to produce great improvement in our present stock.

I will add that Mr. William V. Wilson, of Ridgeway, in this county, one of our most intelligent and enterprising farmers purchased at the State Fair at Utica, in 1845, the "Sir Henry," who took the 2d premium in the class of blood horses. This is a noble animal, combining the rare qualities of strength, elegance of action, beauty, and the very purest blood.

The farmers of Orleans are beginning to realize the importance of attending to the improvement of their stock of horses, and will, in due season, reap a handsome profit for their well directed enterprize.

Indeed, they are already beginning to command the attention of dealers in horses, and supply a very considerable number for eastern markets.

At the State Fair at Auburn, a premium was awarded to Messrs Gould, of Gaines, in this county, for the 2d best pair of matched horses; and the "Young Emperor," bred by Mr. Wm. Gilson, of Shelby, attracted deserved attention, receiving a discretionary premium of $10. Peter Saxe.

Yates, N. Y., Jan., 1847.

POTATO DISEASE.

All our observations in regard to this mysterious malady, confirm us more and more in the opinion some time since expressed, that nothing of any consequence has yet been ascertained as to its cause or prevention. The opinion seems to be gaining ground in Europe, as well as here, that it is an epidemic. In our December number we alluded to the fact, that other kinds of vegetation appeared, last season, to be attacked with blight in a similar manner to potatoes. The same appearance was noticed in the British islands. In the *Gardeners' Chronicle* of November 7th last, is a communication in reference to the potato crop in the Isle of Man. The writer says—"when the potato haulm was affected by the blight, the fern, rag-wort, nettles, and even part of the heath on the hills, were entirely destroyed."

The (Edinburgh) *Quarterly Journal of Agriculture* for October, in reference to this subject observes—

"The recurrence of the disease this season excited much surprise, for the potato plant has not shown so much vigor, and exhibited so beautiful and healthy a display of blossom for many years." * * * "Whatever may be the nature of this affection which has overtaken the potato, it does not seem to be confined this season to that crop. The beans have had their leaves blackened, and their stems shrivelled by apparently the same cause and the rottenness in the turnep may be safely ascribed to the same influence. The products of the flower garden have not escaped the affection, for the leaves of the pæony seem to us to have suffered from the same source. Even the forest trees are affected, as the appearance of the balsam poplar clearly indicated. And wild plants have been observed to suffer in a similar manner, as is instanced in the case of the common fern. So far as we can discern, the mysterious cause of this universal affection, is very much 'like the pestilence that walketh in darkness, and that wasteth at noonday.'"

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[*] This "True Briton, or Beautiful Bay," is supposed *not* to be the horse registered under the name of *True Briton*, which was got by the imported Othello, &c. The horse now under consideration was a racer of celebrity, and won a great match near Philadelphia, in 1765.'6. It is not probable that he was the sire of the "Old Morgan," because, supposing him to have been only five years old at the time of the race mentioned, he would have been *thirty-two* at the time the "Old Morgan" was begotten, in 1792.

DOMESTIC ECONOMY.

Yeast.—The importance of yeast in domestic economy is well known. It consists of a variety of components; and among others of acetic and malic acids, alcohol, potash, lime, &c., but its essential and peculiar quality depends entirely on the presence of a portion of gluten or vegetable albumen, in a state of incipient decomposition.

If a pure solution of sugar in water be excluded from the air, it remains perfectly unchanged for any length of time. But if an organic substance in a state of slow decomposition, as for instance yeast, be introduced, the particles of sugar also become affected, and participate in the change, and carbonic acid and alcohol are the result.

After the yeast has converted a certain portion of the sugar compared with its own bulk, into alcohol, the yeast itself entirely disappears, and an additional quantity must be added to renew the fermentation. But when added to a mixture of flour with water, which contains gluten as well as sugar, a new portion of yeast is produced by the decomposition of the gluten of the flour. Thus yeast reproduces itself, by inducing the vinous fermentation in substances containing gluten and sugar. Thus, in a brewery, the quantity of yeast continually increases.

The presence of water is necessary for sustaining the properties of yeast; hence in a dried state it may be kept sometimes for months. Its action is also arrested by a temperature equal to that of boiling water, or greater; hence the fermentation of dough is at once arrested by baking. Hence, also, in drying solid yeast for preservation, too great a heat will at once destroy it.

In making bread, yeast operates in rendering it more light and porous, by the carbonic acid gas which is liberated, forming innumerable cavities of air in all parts of the loaf. A similar effect is produced in a more rapid degree, by the mixture of soda and tartaric acid or cream of tartar, and applying them in a dry state to the dough. Carbonic acid is abundantly liberated by the union of the acid and soda, and the bread or cake rendered very light; and a similar result is finely produced in making buckwheat cakes, by using buttermilk and saleratus, the acid of the milk freeing the carbonic acid gas from the saleratus.

Mode of Making Yeast.—The following mode, which is found very convenient in practice, was stated to us by a notable housewife. One quart of hops is boiled about three hours with about seven gallons of water; after that the resulting liquid is passed through a cullender on three quarts of Indian meal, or so much that the mixture will be like *batter*. Half a tea-cup of salt is added, and when cooled to new milk warmth, half a pint of yeast. After stirring well, it stands 15 or 20 hours, and Indian meal added till of the consistency of dough, when cakes, three inches in diameter and half an inch thick are made from it, and dried on a board by the fire; much heat will destroy the yeast, and if not dried in two or three days, fermentation will proceed so far as to destroy it. These cakes will be good for three months; one of them soaked half an hour in warm, not hot water, will be enough for a large loaf.

The yeast prepared by the Hungarians is similar, and will keep, it is said, a whole year. During the summer season, they boil a quantity of wheat bran and hops in water; the decoction is not long in fermenting, and when this has taken place, they throw in a sufficient portion of bran to form the whole into a thick paste, which they work into balls, and dry by a slow heat. T.

Humbugs—Preserving Tomatoes.—The publication of untried experiments, with all the assumed assurance of actual truth, has become quite an evil. Some one has given directions for preserving tomatoes for winter use, by stewing and seasoning, and then sealing air-tight in small jars. This receipt has been copied and gone the rounds of the newspapers throughout the country. A very skilful housewife has tried it in the best and most careful manner, scrupulously observing all the particulars. On opening her jars early in winter, she found the tomatoes completely fermented, sour as vinegar, and of course good for nothing. T.

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Hommony.—This article is usually prepared by scalding the hardest and flintiest corn, and afterwards pounding and breaking it in a large mortar till the hulls are so loosened that they may be separated by winnowing. It is a slow and tedious process to prepare it in this manner, though when the excellence of the article is known, it will not be given up on this account. Mr. Bement has a mill in operation at his "Three Hills" farm, which reduces corn to various degrees of fineness, and by being passed through sieves of different construction, it is had either in the shape and size of "samp" or homminy, as is wished. In passing through the mill, most of the hulls are taken off, and by putting the crushed grain in water and stirring it, before the cooking is commenced, the loose hulls float, and may be skimmed off. We have tried some of this hommony, and find it equally as good as that made by pounding, excepting that it is not *quite* as clear of hulls. It is kept for sale by Laisdell, No. 9, South-Pearl street.

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Sour Krout.—A person who is familiar with the manufacture of this article, so much esteemed by the Dutch and other people, whose taste has become habituated to it, has furnished us with the following, in regard to its preparation:—Select sound cabbages, which after having been divested of their outside leaves; must be cut fine; place in the bottom of the barrel or tub designed to receive it, a layer of about six inches in thickness, sprinkling on fine salt, at the rate of about a pint to the barrel; then pound it down with a stick prepared for the purpose, and add another layer, and pound down as before, and so on till the vessel is full. Put a weight on the top to press it down. The cabbage will form liquor which will cover it. It is fit for use in four or five days, and will keep through the winter. It is eaten cold, or heated through, and a little vinegar added.

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Receipt for Curing Hams.—7 lbs. coarse salt, 5 lbs. brown sugar, 2 oz. salt petre, ½ oz. pearl ash, 4 gallons of water. Boil all together and scum the pickle when cold. Put it on the meat. Hams to remain in 8 weeks—beef 3 weeks. The above is for 100 lbs. weight. It is said that hams cured by this mode are of superior quality. It is called the "Newbold receipt," a person of that name in New-Jersey having, as it is said, attained great celebrity for the excellence of his hams, the mode of curing which was kept secret till after his death.

Curing Hams.—The following is the mode practiced by W. Stickney, of Boston, which has been much admired. To every two quarts of a saturated solution of common salt, is added one ounce of summer savory, one of sweet marjorum, one of allspice, half an ounce of saltpetre, and one pound of brown sugar. The whole was boiled together, and applied boiling hot to the hams, which remained in the pickle three weeks.

THE ORCHARD AND THE FRUIT GARDEN.

DAVID THOMAS' ADDRESS.

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We have been favored with a copy of the Address, delivered in September last, before the Aurora Horticultural Society, by David Thomas, its president. The author of this address, as is well known, has long stood among the first of practical, skilful, and scientific horticulturists in our country. His collection of bearing fruit trees, has, for many years, been one of the finest in the State. Hence he speaks from abundant practical knowledge, in the address before us, which is entirely confined to remarks on the culture of fruit. A few extracts cannot fail to prove interesting to our readers, though comprising but a small part of the valuable matter it contains:

"It was the custom in former times, whenever a finer fruit tree appeared in full bearing, for the neighbors to gather round,—some civilly asking for a share as *friends*, some taking it boldly as *robbers*, and some stealthily as *thieves*. May we congratulate ourselves on some improvement in our day?

"How many of the inhabitants of this blessed land of ours—under such glorious skies—raise any thing of the kind better than the old pie cherry, or the sour morello? than the horse plum or the little damson? How many feast, during the proper season, on apricots, the better class of peaches, and on the Seckel and vergalieu pears? There is not one in a hundred—probably not one in a thousand—who has a full supply of the finer fruits.

"In bringing about a better state of things, however, there are many difficulties to encounter. Trees cannot be had without some exertion; we may be cheated with spurious kinds, or they may die in transplanting; they may be infected by disease, or infested by insects; the fruit when young may be destroyed by frost. or when ripe, by plunderers; and under a view of all these discouragements, would it not be better and cheaper to buy our fruit? Here let us pause a moment, and ask, Of whom could we buy? If all the fine fruit of the country was divided amongst us, we should have so little, and that little so dear, (apricots three cents apiece at Rochester,) that we should only be tantalized. and never satisfied. No—to have plenty, we must raise it ourselves.

"The first step, then, is to select the best kinds; and on this point we cannot be too careful. Differences of climate, even on some hardy sorts, is very great; and three degrees of latitude may produce more than three degrees of flavor; so that the *excellent* somewhere else, may not be *excellent* here. As an instance: the Bezi de la Motte pear is very fine at Philadelphia, while with us, it is unsuited to human lips in four seasons out of five. Let me give another instance: From nearly twenty kinds of peaches—fine on the sands of New Jersey, whence I procured them—I shall not have more than three or four well suited to this district. But what a loss we sustain in trying such experiments! It is far better to get such *sorts* of high character as have been fully proved to be adapted to this particular climate, though the *trees* may be obtained from the south, east, or west."

"*Flavor*, *productiveness*, and *size*, are three points of the greatest importance in the character of fruit. At the head stands *flavor*—for without it fruit is worthless. Next stands *productiveness*—for if the tree is a poor bearer, it is of little value. *Size* is the third in importance; and still lower down in the scale is *beauty*, including *shape* and *color*. Many cultivators, however, reverse this order, recommending large and showy sorts, chiefly because they *are* large and showy. The Monthly Reviewer once wittily said, 'I prefer a peach to a pumpkin;' and I conclude that a similar preference has prevailed when I see small varieties cultivated. This is finely illustrated by the Seckel pear—small, but very superior."

"In times past, it was difficult for an amateur in many cases to know what sorts he had in his garden—for nurserymen themselves often knew not what they were propagating. I have purchased bundles of trees, where not one-half of them proved true to their names. Indeed, it could scarcely be otherwise, from the course then pursued. A tree, perhaps, was procured from some distant nursery, and propagated to a great extent without waiting to see the fruit. If worthless, as it often happened, the amount of injury was very great, as scions were frequently carried hundreds of miles. I remember the first bundle that I obtained from a *great* nursery. So confident was I that all was right, and so eager to have such fine sorts widely scattered, that I invited my friends and neighbors to call and procure cuttings, little suspecting that a part were spurious, and a part suffering from a malignant disease. The cost, the care, and the labor, however, all went for nothing; and I felt, as hundreds of pomologists have felt in its true force, what the preacher meant by 'vexation of spirit.'

"Among the ways in which blunders of this kind occur, is that of trusting to careless assistants, instead of the proprietor's seeing to the business himself. To cut a graft from the wrong part of a tree, or to take up a young tree from the wrong row—is not very uncommon; and serious losses are often the result. Once I brought home with me from a distance of more than four hundred miles, a tree kindly presented to me as a treasure; but a servant was sent to take it up, and got one that was spurious. Somehow—perhaps in this way—the late President Knight scattered an inferior variety, in place of his famous Monarch pear; and he estimated the vexation and damage at more than ten thousand pounds sterling."

REMARKS ON BUDDING.

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In the October number of the Cultivator, for 1846, a correspondent at Prospect, Conn., gives us some account of his experiments in budding, the past summer. As I have in former years, repeatedly tried all the experiments there detailed, it may perhaps be interesting and useful to give the results.

With regard to the *time* of budding, the remarks in that communication are mainly correct. I have never found any advantage in deferring budding after the end of the summer months, though peaches and sometimes apples, may be budded very early in September, provided the season is warm and moist, so as to continue the rapid growth of the stocks; for as soon as stocks cease to grow, the operator may as well hang up his fiddle at once. In some seasons, I have known the majority of buds to fail, when inserted as late as the middle of August; in others, I have had good success as late as the middle of September. What was the reason? In the former case, the stocks were not thrifty, and their growth had been almost wholly arrested by drouth. In the other, the soil was rich, the trees vigorous, and the season warm and wet, so as to keep up the growth in vigorous state. It however rarely happens that any budding is better when done so late, and very rarely so good.—Plums usually pass the most rapid season of growth in July; hence they *must* be budded early; cherries *often* pass that period early, but not invariably; hence the practice must correspond. Peaches may be usually budded considerably later; because being the native of a warmer climate, their growth continues longer, and is more rapid than that of most other fruit trees.

But as a general rule, caution is needed, in budding too early. Unless the buds are well matured, they will be likely to fail. Apple buds, early in July, inserted in very thrifty stocks nearly all failed—they had not become sufficiently matured,—the young wood from which they were taken was soft, and soon shrivelled. In one season, cherry buds, set the middle of July, nearly all lived and grew; in another, set at the same time, they nearly all failed from a want of maturity, while those set two weeks later did finely. It very rarely happens that peach buds are sufficiently matured before the early part of August.

With regard to starting the growth of buds the same year they are inserted, I have never found any advantage from it, and often considerable loss. I started peach and apricot buds, by keeping down the stock, and in some cases they grew more than a foot. But they never matured the wood; and in every case without exception, they were wholly destroyed by the winter. The shoots themselves were not only destroyed, but the poisoned or fermented sap resulting from their death, ran down to the roots of the stock; and the whole tree perished. Pears and apples were not thus destroyed; but I have repeatedly found that the small growth they made had an effect to stunt them, and by the end of the second year, they were no larger than those of one year's growth from the bud in spring, and not so straight and thrifty. Perhaps others may be more successful; I merely state these as the results of numerous experiments.

I ought to have stated one fact, derived from considerable experience, that in setting buds quite early, before the wood has fully hardened, a great benefit results from cutting off plenty of wood from the shoot, with the bud:—the practice of English writers on this point, of removing the small piece of wood, being highly detrimental. V. W.

Western New-York, Nov. 1846.

RAISING YOUNG QUINCE TREES.

An intelligent cultivator of fruit has very successfully adopted the following practice for raising quince trees in the nursery. Instead of planting the cuttings of the desired variety into the soil, as by the usual method, he inserts each cutting as a graft into an apple root, precisely as in common root-grafting. The cuttings commence growing rapidly at once, deriving as they do a full supply of nourishment from the root of the apple; and afterwards throwing out roots of their own, as they always do very freely, the apple root separates and dies, while the quince continues to flourish on its own roots. This is found to afford very handsome and thrifty young trees, and with much greater certainty than if raised simply by cuttings in the soil.

The same cultivator picked the past season *two barrels* of quinces from a single tree. This tree is eighteen years old, and one foot in diameter near the ground. As with all the other trees in the orchard, the soil around it has been kept rich and constantly cultivated. T.

Corn Oil.—It was stated at the New-York Farmers' Club, last winter, that a light-house on Lake Erie had used oil made from corn, for burning; and that about sixteen gallons of oil had been obtained from a hundred bushels of corn.

GRAFTING GRAPE VINES.

In the Cultivator for the present month I perceive a notice of "a correspondent of the Ohio Cultivator," who has succeeded in grafting foreign grape vines upon newly transplanted Isabella vines. It strikes me as a very remarkable coincidence that the person alluded to should not only have grafted the same number of vines in precisely the same way that I did, but should have described the operation in the very words which I made use of in a letter to you, which was published on page 237 of the last volume of your paper.

Is not such a 'freak of nature' worthy of observation? H. W. S. C.

Oatlands, Burlington, N. J., Jan. 4, 1847.

Cranberries.—James N. Lovell gives the Barnstable Co. (Mass.) Agricultural Society a statement of his mode of cultivating cranberries. He says that in 1834 he set out cranberry-vines on what had been a cedar-swamp, covered over with beach sand. They have done well, and the average yield the past season was a bushel and a half to the square rod—or at the rate of 240 bushels per acre. He kept the lot flooded with water till about the 15th of April each year. For gathering, he gives from one-fourth to one-sixth, according to the abundance of the fruit. He gets two dollars per bushel, the mode of measuring being to give nine half pecks, struck measure, for one bushel. He speaks of a worm which has sometimes attacked his vines, and to destroy which he recommends sowing on them salt or ashes, about the middle of July, while wet with dew, at the rate of a bushel to forty rods, or four bushels to the acre.

THE POTATO NOT A NATIVE OF VIRGINIA.

Some years ago, I had an opportunity to read Gerard's Herbal, (edition of 1633,) and was aware of his assertion, before I saw the extract relative to the potato, in the last Cultivator, that he had "received roots hereof from Virginia." Probably he *believed* so; but very improbable that he *did* so. He has neither named the person from whom, nor the year in which, he received them,—things scarcely to be omitted, if they had been brought to him *directly* from that country.

At a time when newspapers were not published to correct the idle rumors of the day, it is not surprising that the native country of the potato, should be mistaken; and however eminent Gerard was as a herbalist, his ignorance in some other matters, was very remarkable. In his account of the African Marigold, (*Tagetes erecta*,)—well known to have come originally from Mexico,—he says, "They grow everywhere almost in Africke of themselves, from *whence we first had them*, and that was when Charles the fifth, *Emperor of Rome*[!] made a famous conquest of Tunis."

The author of the article on the Potato in the Library of Entertaining Knowledge, evidently mistook "the Wild Potato," (*Apios tuberosa*,) for the common potato, (*Solanum tuberosum*.) This would not have been the case, if Heriot had also described the common potato; and his not doing so, proves conclusively to me that the early settlers never found it there. Neither have any of our botanists. David Thomas.

Greatfield, 12 *mo.* 20, 1846.

Rice at Rome.—The attempts made the past season to cultivate rice at Rome, have fully succeeded, and a company has been formed for growing rice on the extensive flats of that country. An attempt is also about to be made to introduce its culture on the Delta of the Rhone, where there are about 50,000 acres capable of being flooded and turned into rice fields.

The amount of tea consumed by the people of the United States is 18,000,000 pounds annually.

FARMERS' CLUBS.

THERE is nothing like discussion to bring out the various points of a subject, and present each in its true light; hence we do not know of a better means of eliciting facts in relation to the business of farming, and thus advancing the interests of those engaged in it, than the formation of neighborhood associations or "Farmers' Clubs." These associations have become very common in England, and have been formed to some extent in this country, and wherever known, their great usefulness is admitted. Under proper regulations, they constitute at once the means of acquiring useful knowledge, and of social enjoyment.

The form or plan of association, may be very simple. The farmers of a certain township or district agree to meet once a week, or once in two weeks, during the winter season, at each others' houses, in rotation, for the discussion of questions relating to rural management. Perhaps the following might answer:

ARTICLE I. The subscribers agree to form an Association under the name of ——— Farmers' Club, the object of which is to improve ourselves in knowledge relating to Agriculture, Horticulture, and Husbandry generally.

ART. II. The officers of the Association shall be a President, whose duty it shall be to preside at the meetings, and a Secretary who shall keep such records and minutes as the Association shall direct.

ART. III. The officers shall be elected by ballot, and shall hold their places till others are chosen in their stead.

ART IV. During the months of ———, the Association shall meet at such times as may be agreed on by a majority of the members, for the discussion of questions. The meetings shall be held in rotation, at the houses of the respective members; commencing and proceeding in alphabetical order.

ART. V. Questions shall be offered in writing, and such shall be chosen for discussion, as the Association may agree on by vote, at any regular meeting.

ART. VI. This constitution is subject to amendment or alteration as a majority of all the members shall direct.

The following might form some of the questions for discussion. *In all cases it should be understood that questions have particular reference to the district where the association is located.*

What course of farming is most profitable for the different soils of the district?

What is the best mode of cultivating Indian corn? The same question as applicable to other crops grown in the district.

What is the best mode of managing and applying barn-yard or animal manures? What are the best means of increasing the supply of manures? The best modes of using peat or "muck?" Whether by mixing with animal manures, urine, ashes, lime, or any other substances? and the effects on various crops as compared with common animal manures?

These are but few of the questions which might be discussed with advantage. Others will of course be suggested. They may be offered at any time, and the secretary should keep a list of them, which may be read before the association whenever called for.

It is the practice in England, and we think it might be well adopted here, to pass a resolution at the close of each discussion, expressive of the views of the subject which has been under consideration. This gives the discussions a weight and character which entitles them to notice. For instance, suppose the question to have been—"What is the best mode of rearing and fattening swine?" the following might be adopted:

Resolved, That in this district the most profitable mode of rearing swine and making pork, is to feed the pigs freely from the first with dairy-slops, (that is, skimmed milk or whey,) if it can be had on the farm, giving them a run on clover or grass through the summer, and in the fall fatten them in clean warm pens, with a mixed food of potatoes, apples, or pumpkins, with meal of Indian corn, barley, or peas and oats, *cooked*—the pigs to be slaughtered when from eight to ten months old.

The discussions and decisions of associations formed on this plan, would form the most interesting matter for agricultural periodicals: and we shall be pleased to receive reports of clubs for insertion in our columns. Confident of the utility of such organizations, we trust no time will be lost in getting them up, in all parts of the country. *Now* is the time—while out-door operations are principally suspended, to prepare for action—for that action which shall be most effective. Improve the present season in the acquirement of *knowledge*; and under all the lights and advantages which that confers, be ready to commence business at the right time and in the right way.

BEES, BEE-HIVES, AND BEE-MOTHS.

Mr. FRANCIS CLARKE, of Ypsilanti, Michigan, sends us the following description of a bee-hive which he has constructed:—

"I place two hives side by side, both precisely alike; dimensions, say, front 22 inches, back 19 inches in height, by 6¾ inches in width inside, with a chamber 6 inches wide for a drawer; this leaves the main part of the hive 15 inches front, 12 inches back. The two hives communicate with each other by a hole 3 inches in diameter, 6 inches below the under side of the chamber floor; both are set together upon a floor-board inclining 3 inches from front to back; the floor-board has a 4 inch square wire screen under each hive, with a groove 3 inches long by three-eights in., for the admission of the bees. The hives are connected together by hooks and staples, and the top covers the whole. The object you will see is to separate the hives at a proper time, and place an empty one by the side of each full one. saving the necessity of watching them for natural swarms."

Mr. CLARKE informs us that when he commenced keeping bees, in the spring of 1846, he was told that the bee-moth had never been known in that region; but he found them very plenty and troublesome. Mr. C. mentions that it has been asserted by Mr. WEEKS in a communication to the Cultivator, in 1843, that the egg of the moth will not hatch where white-wash is used; and Mr. C. wishes to know whether Mr. W.'s experience since 1843 to this time, proves the efficaciousness of white-wash in this respect. Mr. C. is desirous of knowing the best plan of preventing the ravages of the bee-moth, and we should be obliged if our correspondents will furnish suggestions on this point. As to the best plan for an Apiary, for which Mr. C. inquires, we have seen nothing which we think equal to the plan mentioned in our last volume, page 305, and also alluded to in our last number.

AGRICULTURAL SOCIETIES.

NEW-YORK STATE AG. SOCIETY.

The annual meeting of the New-York State Ag. Society was held at the Assembly Chamber of the Capitol, on the 20th and 21st days of last month—the President, J. M. SHERWOOD, Esq., in the chair. LUTHER TUCKER, Secretary.

After the arrangement and call of the roll, the applications for premiums were distributed to the various committees.

On motion of L. F. ALLEN, Esq., of Erie, a resolution was adopted, that a committee of three be appointed from each Senate district, to nominate officers of the Society for the ensuing year, and also to recommend the place for holding the next Fair of the Society—the delegates present from each District to appoint the committee for their District. A recess was then taken, to enable them to fulfil this duty. On their return to the room, the following gentlemen were announced as the committee on nominations, &c.

1st District.—Messrs. S. S. Benedict, J. S. Titus, and Wilson Small.

2 Messrs. Lewis D. Berrien, Wessill S. Smith, and James E. Beers.

3 Messrs. J. J. Viele, J. P. Beekman, and A. Van Bergen.

4 Messrs. Orville Clark, Thos. H. Marvin, and Abijah Beckwith.

5 Messrs. Benj. Enos, John Dean, and A. P. Grant.

6. Messrs. Charles Cook, J. S. Wadsworth, and E. Mack.

7 Messrs. G. V. Sackett, J. T. Rathbone, and J. M. Ellis.

8 Messrs. Wm. Buel, G. Hard, and J. T. Bush.

On motion of BENJ. ENOS, Esq., of Madison,

Resolved, That a committee be appointed to memorialize the Legislature to renew the law extending aid to the State and County Agricultural Societies, which expire with the old Constitution. [Committee, Messrs. Enos, Johnson, and Tucker.]

On motion of Mr. ALLEN, amended by Mr. GEDDES, the Constitution of the Society was so amended as to make all Ex-Presidents permanent members of the Executive Committee.—agreeably to notice given at the last annual meeting, by Maj. Kirby.

Mr. L. F. ALLEN offered the following amendment to the Constitution, to be acted upon at the next annual meeting:

The second section of the Constitution of this Society, shall be so amended as to locate the several Vice-Presidents thereof, one in each Supreme Judicial District of the state, as may be organized by the Legislature, instead of the Senate districts, as heretofore; they being abolished by the new Constitution of the State.

The following resolutions, introduced by Mr. J. S. WADSWORTH, of Livingston, were passed, after an extended discussion in which Messrs. Wadsworth, Geddes, Johnson, Viele, Allen, Marks, Beckwith, Peters, Bloss, and others, took part:

Resolved, That in the opinion of this Society, any restriction upon the transmission to market, of the products of the soil and industry of the country, are alike injurious to the interests of the producer and consumer, and when not required by the exigencies of the public service, are an invasion of the rights of the citizen.

Resolved, That this Society regard the prohibition in the charters of the several railroads parallel to the Erie canal, against the use of said roads for the transmission of freight during the continuance of canal navigation, even though the same tolls are paid thereupon as are exacted upon the canal for the same distances, as an unnecessary, and therefore, an unwise interference with the industry of the state.

Resolved, That the Executive Committee of this Society, be directed to prepare and lay before the Legislature, a memorial, praying that honorable body to authorize these railroads to carry freight at all seasons of the year, subject to the same tolls as are paid upon the Erie canal.

Gen. VIELE, of Rensselaer, submitted the following resolutions for future consideration, which, on motion, were referred to the evening session:

Resolved, That, in the opinion of this Society, the profession of practical agriculture cannot fail to be vastly improved by a general diffusion of scientific knowledge applicable thereto.

Resolved, That by uniting scientific knowledge with practical skill, the profession of agriculture will obtain the elevated station that belongs to it, and we regard it as a sure method of improving the moral condition of the people; and that we believe that the time has arrived which demands that this subject should receive more attention than has hitherto been given to it.

Mr M'INTYRE, the Treasurer, read his report, showing the following receipts and expenditures for the past year:

RECEIPTS.

Balance per last report	$546.21
Memberships at annual meeting,	137.00
Wm. Buel, life membership,	50.00
Memberships at various times,	10.00
Dividend on Mohawk bonds,	105.00
Interest on Bond and Mortgage,	70.00
Receipts at Auburn Show,	4,333.17
Jas. Fellows, for Pulteney estate,	50.00
State payment,	700.00
Interest on Mohawk bonds,	105.00
Transactions sold,	5.00
Interest on Bond and Mortgage,	70.00
	$6,191.38

PAYMENTS.

Premiums paid,	$1,599.43
Expenses at Auburn,	710.82
Salaries paid,	706.00
Sundry expenses,	630.71
Invested in Bond and Mortgage,	2,000.00
Balance in hand,	534.42
	$6.181.38

Evening Session.

On the report of Judge SACKETT, chairman of the committee on nominations, the following gentlemen were elected officers of the Society for the ensuing year:

President—GEORGE VAIL, of Troy.

Vice-Presidents.

1st District—Wm. T. McCoun, New-York.
2d " John A. King, Jamaica.
3d " C. N. Bement, Albany.
4th " Samuel Cheever, Stillwater.
5th " O. C. Chamberlain, Richfield Springs.
6th " Eli C. Frost, Catherine.
7th " H. S. Randall, Cortlandville.
8th " Wm. Buell, Rochester.

Recording Secretary—Luther Tucker, Albany.

Corresponding Secretary—Joel B. Nott, Albany.

Treasurer—J. McD. McIntyre, Albany.

Executive Committee—William A. Beach, Saratoga Springs, Joshua T. Blanchard, Saratoga Springs, Luther Bradish, New-York, G. V. Sackett, Seneca Falls, Thos. J. Marvin, Saratoga Springs.

The committee reported E. P. PRENTICE as Vice-President for the 3d District, but on his declining, the name of Mr. BEMENT was substituted.

The committee also recommended SARATOGA SPRINGS, as the place for holding the next State Fair.

Mr. L. F. ALLEN, chairman of the committee appointed last year to report a selection of Fruits, best adapted to the different portions of the state, said that they were prepared to report only in part. They recommended a list of apples best adapted to home use and exportation. This list he would present, and ask that the committee might be continued.

Mr. A. said that it was admitted that the climate of this state was well adapted to the cultivation of apples, pears, peaches, &c., and he did not doubt that within a year, the subject of fruits had become to be better understood than ever before, and more had been learned in five years than had been learned previously from the day of the landing of the Pilgrims.

The study was deeply interesting. The whole people seem to have taken hold of it. The result is that immense quantities of excellent fruit are now annually exported; and there are some farmers on the North river who make more from their orchards than from their whole farms beside.

Mr. A. read the following list of apples, which he highly recommended:—

Early.—Early Harvest, Early Bough, Strawberry, Williams' Favorite, Early Joe.

Autumn.—Fall Pippin, Golden Sweet, Gravenstein, Jersey Sweeting, Rambo, Detroit.

Winter.—Baldwin, Yellow Bell-flower, Hubbardston Nonsuch, Newtown Pippin, Northern Spy, Blue Pearmain, Rhode Island Greening, American Golden Russet, Roxbury Russet, Swaar, Ladies' Sweeting, Talman Sweeting, Esopus Spitzenburgh, Vandevere, Waxen Apple.

Mr. MARKS, of Greene, gave the following notice:

Notice is hereby given that a resolution will be offered at the next annual meeting of this society, for the alteration of the Constitution, so that the election of its officers by ballot may be dispensed with by a vote of two-thirds of the members of said society present.

Thursday, Jan. 21.

The Society convened in its room in the old State Hall, at 10 o'clock A. M., when the reports of the several Committees on the award of Premiums, were read.

Mr. ENOS, of Madison, from the committee to memorialize the Legislature for a renewal of the law in aid of Agricultural Societies, reported a memorial which was adopted, and directed to be presented to the Legislature.

On motion of Mr ALLEN, of Erie.

Resolved, That $50 be appropriated, under the discretion of B P. Johnson, Esq., Chairman of the Cheese Committee, for the purpose of obtaining the documents appertaining to the sixty cheese dairies of Herkimer County, as exhibited at the State Cattle Show in Utica, in 1845.

On motion of Mr. WADSWORTH, of Livingston,

Resolved. That the Executive Comittee be directed to offer premiums for the present year, to the amount of $2,500, exclusive of books belonging to the Society.

2. That $1.500 be appropriated for the expenses of the Society for the year 1847, other than for premiums, and that the authority of the Treasurer to make payments from the treasury, upon the order of the Executive Committee, be limited to that amount.

Mr. ALLEN of Erie, gave

Notice that a resolution will be offered at the next annual meeting of the Society, so to amend the constitution, that a nominating committee of one from each Senatorial District of the state, shall be selected from the members of the Society present from each Senatorial District, who shall report the names of proper persons for the officers of the society for the ensuing year; and that no person shall be elected to any office of the society who is not a member thereof.

Evening Session, Jan. 21.

The Secretary read the list of premiums awarded on the reports of the several awarding committees, as follows:

On Cheese, Dairies and their management—Newbury Brown, Warsaw, Wyoming County, 1st Premium, $50.00—400 lbs. to each cow, in a dairy of 40 cows.

Mr. and Mrs. Wm. Ottley, Phelps, Ontario County, 2d Premium, $30.00—at the rate of 400 lbs. per cow, in a dairy of 8 cows.

On Butter Dairies—B. H. Hall, New Lebanon, Columbia Co., 1st Premium, $25.00.

Indian Corn—Charles W. Eells, Kirkland, Oneida Co., 1st Premium, $15.00. 123 1-2 bushels per acre, at 56 lbs. to the bushel.

Benj. Enos, DeRuyter, Madison Co., 2d Premium, $10.00.—111 bu. 52 lbs., per acre.

Robert Eells, Westmoreland, Oneida Co., Vol. Transactions.—103 3-4 bu. per acre.

Peas—Amos Miller, Vernon, Oneida Co. 2d Premium, $10.00.—47 bushels per acre.

On Farms—Sets of Society's Transactions were awarded to James Callanan, New Scotland, Albany Co., and to James Van Siclen, Jamaica, Long Island.

Prize Essays—Extirpation of Canada Thistles, Ambrose Stevens, New York, $10.00. Sereno E. Todd, Lake Ridge, Tompkins Co., set Transactions.

Experiments on Indian Corn—J. F. Osborn, Port Pyron, Cayuga Co., $20.00.

Carrots—Wm. Wright, Vernon, Oneida Co., 1st Premium, $10; 909 bush. on 1 27-100 of an acre, at an expense of $25.76.

Wm. Risley, Fredonia, Chautauque Co., 2d Premium, $5.00—1590 1-2 bush. on 1 3-8 of an acre, at an expense of $109 25.

Sugar Beets—J. F. Osborn, Port Byron, Cayuga Co., 3d Premium, Vol. Transactions—774 bush. on 1 acre 15 rods.

Designs for Farm Dwellings—Mrs. J. M. Ellis, Onondaga Hill, Onondaga Co., Premium $15.00.

Barley—Calvin Pomeroy, East Bloomfield, Ontario Co., 1st Premium, $10.00—48 1-4 bush. per acre on the whole crop.

Samuel H. Church, Vernon Centre, Oneida Co., 2d Premium, $5.00—44 1-4 bush. per acre.

E. C. Bliss, Westfield, Chautauque Co., 3d Premium, Vol. Transactions—38 12-32 bush. per acre.

Spring Wheat—Robert Eells, Westmorland, Oneida Co., 2d Premium. $10.00—20, 42, 60 bu. per acre.

Oats—Nathaniel S. Wright, Vernon Centre, Oneida Co. 1st Premium, $10.00—75 1-4 bush. per acre for 13 acres.

Robert Eells, Westmorland, Oneida Co., 2d Premium, $5.00—77 bush. per acre for 1 acre 37 rods.

Timothy Seed—E. C. Bliss, Westfield, Chautauque Co., 1st Premium, $10.00.

Culture Flax—E. C. Bliss, Westfield, Chautauque Co., 1st Premium, $5.00—best 1-2 acre

The President of the Society, J. M. SHERWOOD, Esq., then delivered the annual Address, upon the conclusion of which,

On motion of Mr. WADSWORTH,

Resolved, That the thanks of the Society be tendered to the President, J. M. Sherwood, Esq., for his valuable services to the Society during the past year, and for his appropriate and interesting Address, and that he be requested to furnish a copy of his Address for publication in the Transactions of the Society.

Gen. CHANDLER, of New-York, called up the resolutions introduced yesterday by Gen. VIELE, on the subject of Agricultural Education, which after a very interesting and prolonged discussion, in which the mover, Gen. Chandler, Senators Clark and Beekman, Messrs. Allen, Marks, Johnson, Cheever and Wadsworth took part, were unanimously adopted.

The President then stated that he was requested by the President elect to call a meeting of the new Executive Committee at the Society's room, at 11 o'clock to-morrow, after which the Society adjourned sine die.

Friday, Jan. 22*d*.

The Executive Committee met at the Society's Rooms.

Present—George Vail, President; Samuel Cheever, Caleb N. Bement, and William Buel, Vice-Presidents; J. S. Wadsworth, A. Van Bergen, J. M. Sherwood, and B. P. Johnson, Ex-Presidents; Joel B. Nott, Corresponding Secretary; Luther Tucker, Recording Secretary; J. McD. McIntyre, Treasurer; J. T. Blanchard, T. J. Marvin, and W. A. Beach, Executive Committee.

Twenty-five copies of the "American Shepherd" were received from Mr. Morrell and the Messrs. Harpers, of New-York; and a resolution of thanks was passed, to be communicated to the donors.

Messrs. Prentice, Tucker, and Bement, were appointed a committee to report on the Premium List at the next meeting.

Mr. Tucker tendered his resignation as Recording Secretary.

On motion of J. S. Wadsworth,

Resolved, That Mr. Tucker's resignation be accepted, and that the thanks of the Society be most cordially tendered to him for his long and valuable services as Recording Secretary of the Society.

B. P. Johnson, of Oneida, (on motion of J. S. Wadsworth,) was appointed Recording Secretary, in the place of Mr. Tucker, resigned.

It was *Resolved*, That weekly meetings of the friends of agriculture, for the discussion of agricultural subjects, be held at the Capitol, during the session of the Legislature; and that Mr. Howard, Mr. McIntyre, and Mr. Bement, be a committee to make preparations for the meetings.

The Recording Secretary was directed to employ a competent Reporter for these meetings.

A communication was received from D. B. Stockholm, Esq., of Ithaca, on the preparation of a manure called, "*Chemical Guano*," which was referred to Messrs. Johnson and Bement.

AFTERNOON SESSION.

The President presented a communication he had received from Hon. Luther Bradish, of New York, declining, on account of his private engagements and the state of his health, his appointment as a member of the Executive Committee.

On motion of Mr. Buel, of Monroe, Mr. Ambrose Stevens, of New York, was appointed a member in the place of Mr. Bradish.

NEW-YORK COUNTY SOCIETIES.

ONEIDA.—At the annual meeting held at Verona, Jan. 7, 1847, the following premiums were awarded:

Indian Corn.—1. To Charles W. Eells, Kirkland, 123 bu. 27 lbs. per acre; profit $37.74. 2. To Geo. R. Eells, Westmoreland, 103 bu. 44 lbs.; profit $28.39.—3. To Robert Waterman, do., 90 bu. 10 lbs.; profit, $27.53.

Spring Wheat.—1. To Robert Eells, 20 bu. 42 lbs.; profit, $13.10. 2. To Robt. Waterman, 21 bu. 45 lbs.; profit, $19.52.

Barley.—1. To S. H. Church, Vernon, 56 bu; profit, $42.89.—2. To Wm. E. Burritt, Marshal, 48 bu. 36 lbs.; profit, $16.80.

Oats.—1. To Wm. C. Burritt, 102 bu. 19 lbs. per acre, profit, $20.35—2. To S. H. Church, 57 bu. 3 lbs.; profit, $13.58.—3. To Robert Eells, 57 bu. 27 lbs.; profit, $5.23.—Extra premium to N. S. Wright, Vernon, 79¼ bu.; profit, $16.57.

Peas.—1. To Amos Miller, Vernon, 55 bu. 12 lbs.; profit, $21.—2. To Edward Rivenburgh, Vernon, 36 bu. 51 lbs.; profit, $15.84.

Potatoes—half an acre—quantity and quality considered.—The crop was so light that the 2d premium only was awarded, to Wm. C. Burritt, 74 bu. 9 lbs; profit $16.07.—The 2d premium, quantity alone considered, to S. H. Church, 115 bu. 27 lbs.; $19.60.

Ruta-Bagas—quarter acre.—1. To Plyment Mattoon, Vienna, 159 bu. 17 lbs.; profit, $27.38.

Carrots—quarter acre.—1. To Wm. Wright, Vernon, 250 bu. 10 lbs.; profit, $23.43.

After the awarding of premiums, the following gentlemen were unanimously elected officers of the society for the ensuing year:—

Ira S. Hitchcock, Vernon, *Prest.;* Oscar B. Gridley, Marshall; Thomas Horton, New-Hartford; Calvin Bishop, Verona; Wm. Bristol, Utica; Storrs Barrows, Trenton; Luther Comstock, Kirkland; Horatio N. Cary, Marcy; Plyment Mattoon, Vienna; Henry B. Bartlett, Paris; Levi T. Marshall, Vernon, *Vice-Pres'ts.*; Henry Rhoades, South Trenton, *Cor. Sec'y.*; James Rees, Utica Post-Office, *Rec Sec'y.*: Benj. N. Huntington, Rome, *Treas.*; A. H. Halleck, Westmoreland; Lewis Eames, Lee; Geo. L. Brigham, Augusta; Horace H. Eastman, Marshall; and Alfred Blackstone, New-Hartford, *Managers.*

JEFFERSON.—The annual meeting was held on the 24th Dec., when the following officers were elected:—

President, Edward S. Salisbury, of Ellisburgh; *Vice-Presidents*, James Brintnall, of Watertown Jonathan Webb, of Brownville, David Granger, of Champion, Curtis Goulding, of Pamelia, Hart Massey, of Watertown, Oliver Grow, of Houndsfield, Dan'l Eames, of Rutland, Miles Cooper, of Adams, John N. Rotier, of Orleans, A. R. Calvin, of Clayton; O. V. Brainard, *Treasurer;* John C. Sterling, Cor. Secretary; E. S. Massey, *Rec. Secretary; Executive Committee.* Willard Ives. Moses Eames, John Winslow, Phineas Hardy, Abner Baker, Hart Massey, Jr., A. P. Brayton.

The Committee on Field Crops made the following report and award of premiums:

To John R. Ball, best acre of winter wheat, 35 bushels, $4.00; Hart Massey, Jr., 2d best, 30 bushels, average on five acres, $3.00.

E. D. Allen, best acre of Spring wheat, 25¾ bu., $4.00. Hart Massey, 2d best, 23 bu., $3.00.

Hart Massey, best acre of barley, 56 bu., $3; E. S. Salisbury, 2d best, 55½ bu., average on 5 acres, $2. E. D. Allen, 3d best, 42¾ bu., Vol. Trans.

Curtis Goulding, best acre of oats, 67½ bu., $3; Hart Massey, 2d best, 65 bu., $2.

Aaron Shew, best acre of peas, 39½ bu., $3; Jerome Ives, 2d best, 40½ bu., $2.

Samuel Felt, best half-acre of potatoes, 390 bu. per acre, $3; Phineus Hardy, 2d best, 428 bu. per acre, $2.

Nelson Clark, best ¼ acre of broom corn, with sample of 12 brooms, $3; A. P. Lewis, 2d best, $2.

Hart Massey, Jr., best ¼ acre of white beans, 28 bushels per acre, $3.

Moses Eames, best ¼ acre of carrots, 956 bushels per acre, $3; Hiram Converse, 2d best, 600 bu. per acre, $2.

QUEENS.—Extract of a letter to the Cultivator:—"I intended to have given you an account of our Agricultural Exhibition, which was at Flushing, on the 9th of October, and passed off with much eclat. It was attended by several thousands of persons; many from remote parts of the state, and indeed, from other states, and was spoken of by some as superior in many respects to any exhibition of the State Society, and as far surpassing any other county exhibition. Our society has become a pet with our people, and has been the means of infusing a new and vigorous spirit in our farmers, and with the most happy results. The annual meeting of this society was held on the 19th of December, and officers elected for the ensuing year. Hon. Wm. T. McCoun, *President;* and Albert G. Carll, *Cor. Secretary.* All communications intended for the society, may be addressed to the latter, at Jericho P. O."

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received during the past month, from David Thomas, X., Pennepack, Tiller, H., Zea, A. B. Price, Ralph R. Phelps, M. Hayward, J. H. King, Caius, N. S., P. Lewis, Daniel S. Curtis, G. Butler, H. of Oneida, J. Pettit, Samuel S. Hayden, T. H. Austin, H. W. S. C., Z. C. Robbins, Evelyn, John Moxon, E. Phinney, John Wilkinson, A Subscriber, Norfolk, H. A. P., Wm. Little, H. A. Parsons, H. W. Lester, Geo. K. Pardee, J. R. Todd, S. S. R., H. L. R. Sandford, B., S. W. Jewett, W. Bacon, J. Townsend.

Books, Pamphlets, &c., have been received as follows:—Transactions of the Essex (Mass.) Ag. Society, for 1846—a handsome pamphlet of 100 pages, from J. W. Proctor, Esq.—Address upon Education and Common Schools. By James Henry, Jr. With an Appendix, embracing the views of Col. Young, Gov. Clinton, and others. From the Author.—Transactions of the Worcester (Mass.) Ag. Society for 1846, embracing the annual address, Reports of Committees, &c.—The American Journal of Science and Arts, for Jan.—An Address delivered before the Aurora Horticultural Society, by David Thomas, President, on the 1st Sept., 1846.—American Journal of Insanity, for January, edited by the officers of the N. Y. State Lunatic Asylum, and published at Utica, by Bennett, Backus & Hawley; 96 pages, quarterly, at $1 a year.—The Farmers' Agricultural Chemistry, compiled from the best authors, by M. M. Rodgers, M. D. Published at Geneva, by G. H. Derby, & Co.—Address before the Hartford Co. Ag. Society, by Rev. Horace Bushnell. From S. W. Bartlelt, Esq.

Ag. Societies and The Cultivator.—We have, within the last month, received the following subscriptions to the Cultivator. From the

Chittenden Co. (Vt.) Ag. Society,........	200 copies.
Rhode Island Ag. Society,................	154 "
Dutchess Co. Ag. Society,................	102 "
Caledonia Co. (Vt.) Ag. Society, ...	72 "
Cortland Co. Ag. Society,................	21 "
Saratoga Co. Ag. Society,................	20 "
Smith's Falls (C. W.) Ag. Society, ...	20 "
Queens Co. Ag. Society,..................	11 "

Price of the Cultivator.—We have had several inquiries as to whether we could furnish the Cultivator to Agricultural Societies at fifty cents a year. To save farther inquiries on the subject, we here state that the Cultivator cannot be had at that price by Ag. Societies or by any one else. In order to induce as general a subscription to the Cultivator as possible, we fixed the terms as low as it could possibly be afforded; and to enable every farmer to avail himself of the lowest rate, we put it to clubs of 15 as low as we sell it to Agents who take from 100 to 800 copies. Could we afford the paper at a less rate, we should reduce the price alike to all. We think the Cultivator, at the club price of 15 copies of $10, the cheapest publication in the country, considering the size of the sheet, its illustrations, &c., and it could not be afforded at that price, but for the extensive circulation which it receives.

Spring Wheat.—J. B., (Nansemond County, Va.) We should think it might be an object to try spring wheat on the soil you mention. As to the best variety, we believe the Black-Sea has generally succeeded best in this section. It can be had at the Albany Ag. Warehouse, at $1.50 per bushel.

Plan of a Barn.—"A Subscriber," (Baltimore, Md.) For a general outline, we would refer you to several barns which are spoken of in this number, under the head of "Sketches of Massachusetts Farming." We are in hopes, however, to give the details of a plan shortly.

Plowing in Orchards. "A Subscriber."—It is best to use oxen in plowing orchards, wherever practicable, because they can be made to work so much closer to the trees than horses, without doing harm. But if horses must be used, the whiffletree should be as short as practicable, and we have seen the outside trace chains and the ends of the whiffletrees covered with pieces of old carpet or bagging, to prevent them barking the trees.

Seedling Apples.—We are indebted to Mr. J. C. Hastings, of Clinton, N. Y., for some specimens of a seedling apple raised by John Kirkland, Esq., of that place. In shape, size, and color, this apple resembles the Yellow Belle-flower. It is stated that it will keep till June, and Mr. Hastings observes—"for an apple that keeps so long, I am acquainted with but few that are superior to it." We are informed that the samples sent, have been kept since fall in a room adjoining one where there has constantly been a fire, and that they are on this account prematurely ripe. It may be owing to this circumstance, also, that the fruit has less flavor than is possessed by apples of the highest character. We think it, however, a good apple, and worthy of being known and cultivated. Mr. Hastings suggests that there should be a committee appointed by the State Society, to reside in this city, for the purpose of examining and reporting on seedling and rare fruits.

Benson's Hydraulic Ram.—M. Haywood, Rutland, Vt., wishes to know whether this machine can be made to bring water to his barns from a spring forty-five rods distant, and from seventy-five to a hundred feet lower—there being plenty of water and a fall, if needed. We will thank Mr. Bacon, of Richmond, Mass., or any other correspondent, if they will furnish this information, stating at the same time, where and on what terms the machine can be obtained.

Sowing Plaster," year after year on the same land, without any other manure, is not considered an advisable course, in general, though we have known one or two instances where it had been followed on grass many years, and with no diminution in the crop. But in these cases there was probably some remarkable though unknown quality in the soil, which rendered the plaster unusually effective. But we believe it to be acknowledged that the most favorable operation of plaster is when it is applied in connection with animal or organic manures.

"**Mammoth Pumpkin.**"—We have received from Mr. Joseph Clarke, of this city, (No. 82 Washington-st.,) a pumpkin of the above-named variety, which weighed 103 pounds. It was quite fine in the grain, and would have made the nicest pies, had it been used before decay had commenced.

Fine Geese.—We acknowledge the reception of the carcass of a Bremen *gosling*, (six months old,) weighing *seventeen pounds*, from Col. Jaques, of the Ten-Hills farm, near Boston. Col. J. imported this variety of geese from Bremen, about 25 years since, and has bred them in their original purity ever since. We saw at his place, in December, a most splendid flock of them. In appearance, they are beautiful as swans, and are scarcely inferior to them as an ornament to sheets of water near residences. They are of snowy whiteness, with orange-colored bill and legs. These are the invariable marks of the true breed, and any deviation from them may be regarded as denoting spuriousness. We mention this, as geese with *red* bill and legs have sometimes been sold as Bremen. They fatten to a greater extent than any other kind—sometimes reaching the weight of 20 pounds, dressed, at seven months old. Col. J. has killed some at that age which weighed 18½ lbs., when ready for the spit. Their flesh, as we can attest, is of superior quality.

Mr. E. Cheesbro, of Guilderland, in this county, reared, last season, 22 goslings from two geese. One pair of the goslings were sold for $3, the other 20 were killed at Christmas, and weighed from 12 to 16 lbs. each, and sold for 75 cents each. The 22, therefore, brought the aggregate sum of $18—a good income (exclusive of feathers,) for two geese. The goslings were from Bremen geese, and by an African gander. The African is of larger frame than the Bremen, but does not appear to have as great a tendency to fatten.

Difficulty in Making Butter.—The difficulty of procuring butter by churning, spoken of by one of your correspondents in the January number of the Cultivator, is not unfrequently experienced in the fall and winter seasons, where milk and cream are managed in the ordinary way. Hence, some of the best butter makers prefer scalding the milk in cold weather. Mr. Wm. Merrifield, of Guilderland, who received a premium for butter from New-York State Ag. Society, in 1842, adopts the following mode. In winter, the milk stands in the cellar twelve hours; is then scalded over a slow fire to near boiling heat; the pans removed to the cellar; the cream only churned, which seldom requires more than five minutes to produce butter. I can testify to the superior quality of Mr. M.'s butter, having been using at my table for some days, a sample made in the way described, and which is as high colored and nearly as rich as the best of June butter, though the cows were only fed with hay, and no coloring substance used.

Sale of Durham Stock.—We understand Geo. Vail, Esq., of Troy, has recently made sale of a superior Durham bull calf to John Howitt, Esq., of Guelph, Upper Canada. Mr. Howitt, we learn, has a fine herd of Durhams, and has made this purchase to cross with his former stock. This calf was got by the premium bull Meteor, and is out of the imported roan cow Splendor. Though only six months old, his weight, we are told, is 500 lbs. He will doubtless be a valuable acquisition to Mr. Howitt's herd, who has shown his zeal in breeding good stock by sending a distance of about 500 miles for an animal, which at this season of the year, he was under the necessity of transporting for the greater part of that distance by rail-road.

☞ Attention is invited to the advertisement of Messrs. Grant & Co., in this paper. Mr. G. informs us that he has made about three hundred of their celebrated Fan-Mills, and fifteen hundred of their grain cradles, all of which have been disposed of, as fast as they could be got ready for market. They are enlarging their manufactory, and expect hereafter to be able to supply all the orders they may receive.

Good Crop of Corn.—Dr. C. S. Button, of Newark, Wayne Co., N. Y., informs us that he raised the past season, on six acres and eighty-four rods of ground, 1432 bushels of ears of Dutton corn, all sound, and which will give in shelling, one bushel of corn for every two of ears.

Science as applicable to Agriculture.—A. S. Roberts, Esq., of Philadelphia, informs us that Prof. W. R. Johnson, of that city, is about to deliver a course of lectures on chemistry, applied to agriculture, horticulture and animal economy. Prof. J. is pronounced eminently qualified to make such a course interesting and useful.

Fine Sheep.—The Boston papers mention that Geo. Clark, Esq., of Otsego Co., N. Y. sold forty long-wooled sheep (Dec. 23th,) to Mr. Hiscock, of Fanueil Hall Market, at $9.75 each.

Correction.—In our list of post-offices, to which we sent over 15 copies Cultivator last year, published in the December No., *Middletown, Conn.*, was accidentally omitted. The number of subscribers there, was 41.

A Plea for Birds.—We have a communication from "J. T." in reply to an article in our No. of Nov. last, headed "A Plea for Fruit," and signed "X," which we had intended to have published this month. But on reading it more carefully, we have come to the conclusion, much as we fear it will disappoint our friend "J. T.," that it is not best to publish it. Had we observed the paragraph in the article of "X," at which "J. T." takes offence, before it went to press, we should certainly have omitted it. We cannot, however, believe that the public would be benefitted by a controversy on the subject.

☞ A correspondent at Versailles, Ky., writes,—"I would not be without the Cultivator for ten times its price. I have taken it for the last six or seven years, and have the volumes nicely bound, and desire to leave them a legacy to my children. Our staples are hemp and live stock. Our soil is rich, but most of us have too much land, and indeed most of us have too much stock of the unprofitable kind. We pay too little attention to fruit and convenient fixtures on our farms." We trust the defects in Kentucky husbandry, of which our correspondent so frankly speaks, will not much longer continue. The natural capabilities of that noble state are immense, and we cannot but hope that they will soon be appreciated and improved.

Weather in Virginia.—Extract from a correspondent, dated Waynesboro, Jan. 4: "We had a fall of snow here some two weeks ago, of about 2 feet deep. It lasted but about a week. Since Christmas, the weather has been quite warm—mercury has stood at 66 some evenings after dark, on the windward side of houses. Health of the country good. Wheat in the ground looks pretty promising. Farmers busy plowing corn land."

Great Slaughter of Sheep.—Levi J. Hopkins, writes us from Throopsville, N. Y., under date of Dec. 29th, last:—"Ontario county abounds in fine sheep, and Livingston in fine cattle and sheep. Many thousand sheep have been slaughtered here the present fall and winter, for their skins and tallow; and being unusually fat, the business is said to be profitable. Thirty thousand have been killed at one place in the town of Richmond, and from ten to twenty thousand each in three other places in the same county."

Fruit.—In the same letter from which we take the above, the writer says—"one thing I thought worthy of remark; I saw no evidence of the "knots" on plum trees west of Genesee river. Orchards seem to thrive remarkably well. The famous Northern Spy apple, I found very generally engrafted through the country; but in only two instances did I find the fruit. It is truly excellent, and justifies the high praise bestowed on it."

Black Sea Wheat.—R. S. Ransom, of Perryville, N. Y., states that he obtained 283 sheaves of Black-Sea wheat from one bushel of seed, which he thinks will yield a bushel to the dozen, or 23¼ bushels. The grain very plump and heavy.

Good Returns. Mr. T. H. Austin, of Canton Ct., who is for a portion of the time engaged in the management of a small farm, gives us the following statement in regard to his products for the past season They indicate good management, and show correspond ing results:

"The soil where I live is hard and stoney, and the pastures are not as good as in many places; yet the two cows I keep have, without extraordinary keeping, earned me, from April 1st, 1846, to Dec. 1st, (besides furnishing a family of three with butter and milk,) $41.04

ents. Both will give milk within 6 weeks of their coming in. I have fatted two spring pigs, which, at nine months old weighed 619 pounds. I planted two acres of corn, and measured the product of one acre at harvesting, which produced 90 bushels of ears, equal to 0 bushels of shelled.—I have kept 13 hens the past year—they laid from Jan., 1846, to Sept. 12, 1300 eggs; during this time, all set and hatched over one hundred chickens. At the latter date I bought several more, and killed some before the end of the year. I have now 31, which I intend to keep the present year. My object has been to get the most profit at the least expense, instead of doing great things where it would require great expense. In doing this, I have endeavored to take good care of every thing, that no department of my business should suffer at the expense of the other."

Sound Reasoning.—A correspondent at Chuckatuck, Nansemond county, Va., says—" Some of our farmers contend that your mode of farming does not suit them. Now, in part, at least, I think they are mistaken. All farmers should understand the general principles of agriculture, and any information on these points, no matter whence it comes, ought to be considered valuable. Light on any subject is what is wanted. There are none so blind as those who will not see. I for one, do know that the Cultivator throws much light on almost every subject connected with agriculture, whether in reference to this or any other section of country."

Improvement.—Mr. A. W. Howlett, of Castile, Wyoming county, N. Y., informs us that he removed from Troy to his present location, in 1843. The farm on which he resides had been so " run down" previous to his occupancy, that it would produce only ten bushels of wheat to the acre. By the use of clover and good tillage, he states that he has raised the yield of wheat to 22 bushels per acre. His first crop of corn was 20 bushels per acre; his second 30; and third nearly 40. His hay crop was at first one ton per acre; it is now two tons. This is encouraging.

Mr. Pearl Lewis, of Windham, N. Y., writes us in reference to the influence of agricultural publications—"That there is a spirit of improvement abroad, is evinced by the alteration for the better in the appearance of our farms, and in the disposition manifested for reading and inquiry." Mr. Lewis has our sincere thanks for the zeal he has manifested for the prosperity of our work. If a few persons in each county will take hold of the business as he has done, our subscription list would soon be greatly increased.

Eds. Cultivator—In your January number, you make mention in regard to the Crimson Cone Strawberry, described in my published article as *staminate*, that you are informed it is pistillate. As the correction was from myself, I wish it so understood, for in your mention of it, it would seem to be otherwise. I sent the correction the moment I perused the published article in your paper, and it crept in whilst transcribing descriptions of 24 varieties for your Cultivator and the Farmer's Cabinet. Wm. R. Prince.

Mowing Machine.—In our December number an inquiry was made in regard to a mowing machine. Maj. J. B. Dill, of Auburn, informs us that such a machine is manufactured by Obed Hussey, of Baltimore, Md., who is the inventor and patentee, and also by T. R. Hussey, of Auburn, N. Y. The operation of these machines is said to be quite different from that used for cutting grain—the former cutting the grass as even and as close to the ground as it can be cut with a scythe. "It will cut from 15 to 20 acres per day, with one horse and one man to drive. The cut grass needs not to be spread, as it spreads itself in falling over the knife."

Good Sheep.—William Kirk, of Salem, Columbiana Co., Ohio, writes—" there has been a great deal said about the good qualities of sheep and wool; but farmers should keep that breed which would yield them most profit. I have had the common sheep, the Irish, the Merino, the Bakewell or Leicester, and the broad, or fat-tailed breed; but I now keep the Dishley [or Leicester,] which I think the most profitable of any. I have taken the premium for three years at our agricultural exhibitions. I also sold two hind quarters for two dollars and thirty-two cents, (a very high price for this section,) and sold some of my lambs at ten dollars a piece. My flock, (two thirds of them ewes with lambs,) averaged one year within a few ounces of seven pounds to the fleece, for which I got within five cents per lb. as much as they did for their best Merino."

To prevent Dogs from killing Sheep.—Mr. Elijah M. Davis, of White Plains, New-York, states his mode of protecting his sheep from dogs, is to put bells on one or two sheep in each flock. He says, " Before I put bells on my sheep, I was troubled considerably with dogs; but since I have belled them I have not been troubled at all, while some of my neighbors who did not use the same precaution, have suffered more or less. A sheep-killing dog, is a sneaking creature, and when they start up the sheep, bells make a noise and the dogs sneak off. If the sheep are within half a mile of the farmer's house, the bells will give an alarm. During the night, sheep are generally still unless they are disturbed; and if the bells are heard during the night, we may expect that something disturbs them."

Berkshire Hogs.—Extract from a letter received from Mr. Isaac Dillon, dated Zanesville, Ohio, Dec. 12, 1846:—" I still adhere to the Berkshire breed of swine. I have just killed several pigs of one litter, 14 months old; they were wintered on two ears of corn each per day, were turned into clover in April without any additional feed whatever through the summer, and were only fed corn in the field six weeks in the fall, they weighed from 286 to 300 lbs.; though they were never as fat as they would have been, had the same feed been given them in a pen. The black Sussex pigs are still to be seen in the neighborhood. They are a good breed, and I intend to get a boar of a cross of this breed to put to my Berkshire sows."

Suggestion.—A correspondent suggests that a great deal of information might be obtained by different individuals undertaking experiments in relation to various branches of agriculture, such as determining the value of various manures for particular purposes, the best mode of applying them, &c. He thinks that many of our correspondents would be willing to undertake these experiments if they were particularly desired to do it. We are aware that the conducting an experiment on a proper scale to render its results reliable, requires the expenditure of considerable time and attention, and the experimenter may not always find himself, in a pecuniary way, fully remunerated. The trials, however, if conducted as all such trials should be, will tend to the development of *truth*, and this, whatever may be its bearing, will prove useful. To the mariner, it is as essential that the rocks and shoals should be correctly laid down on his charts, as that the safe channel, for his vessel should be delineated. So in agriculture, the favorable as well as the unfavorable principles must be known, before the farmer can be certain that his course is the true one. Hence the first and great object in making experiments, is to ascertain some fact not before established. There are in the country many farmers who are abundantly able to undertake experiments of the kind suggested, and who possess all the qualifications for conducting them in a proper manner. Will they not, for the advancement of agricultural knowledge, and the promotion of their own and the country's interest, engage in the work? We should be glad to receive the names of such as are disposed to accede to this proposition.

PLANK ROADS.

Next to the direct improvement and good cultivation of the soil itself, there is perhaps nothing more essential to rural prosperity than good roads. The constant and important bearing which they have on the farmer's convenience and comfort, in marketing products, in the multifarious business which he must yearly transact, in collecting information, in social intercourse, and in short, in every thing which leads him off his own farm,—render their improvement highly worthy the attention of every patriotic and public spirited man.

A fine M'Adam road is usually considered the most perfect road for the use of the people at large. But perfect as this is, well made plank roads are better, and incomparably cheaper. M'Adam roads often cost *thirty thousand dollars* per mile. Fine plank roads may be made for *one-twentieth* part of that sum.

Much valuable information on the construction of plank roads, is given in a late communication to the Syracuse Daily Star, by **George Geddes**, of Fairmount, Onondaga Co., N. Y., who superintended, as engineer, the construction of twelve miles of such road in that county, the past year. A few of the principal items can hardly fail to be interesting.

A single track consists of a *plank floor* eight feet wide, the upper surface of which is even and level with the surface of the road on each side. Where there is not an extraordinary amount of travel, one track is enough, no difficulty whatever occurring in turning out on the level earth, if it is of hard and compact material. The plank is three or four inches thick, laid crosswise of the road, on sills four inches square, imbedded in the earth. The earth must first be made mellow and fine, and even with the top of the sills, so that when the plank is laid on, there shall be no vacancies beneath. This latter requisite is of great importance to the preservation of the plank; as after a series of years, decay has been found to exist only at those points where the earth below did not touch the plank. The plank keeps its place without any fastening. The ends must not be laid even, otherwise the wheels of the vehicle will be apt to slide along the edge, in the attempt to regain it, after passing off in meeting teams. Perfect drainage is highly important. Where the amount of travel is moderate, three inch plank is thick enough; where it is great, four inch is best. It is much better for such roads to *wear out* than to *rot out*, hence the tolls should be low, to invite travel.—The Canada roads are made of three inch pine plank, and usually last about eight years.

The cost per mile, of the road already spoken of, was as follows:—

Sills, 4 in. sq. 14080 feet, at $5 pr. 1000,	$ 70 40
8 feet width plank, 3 inch, 126720 ft. "	633 60
Laying and grading, $1 per rod	320 00
Engineer, superintendence, &c , 10 per ct	102 00
Gate houses, about	100 00
Add for 4 in. road, 1226 ft	211 00
Sluices, bridges, contingencies,	63 00
	$1500 00

Being made on the site of an old road, the right of way cost nothing. The stock cannot now be purchased at par. The work was all done by the day, by which some thousands of dollars were saved on the twelve miles. The plank should be of pine or hemlock, or some wood not easily warped.

A single quotation from the communication, as to the value of such roads:—"I have seen a M'Adamized road taken up, eight feet in width, to make room for a plank track—and men who have travelled over the best roads in England, say there is not in Great Britain as good a road as the Salina Plank Road." T.

Industry.—"There is more fun in sweating an hour, than in yawning a century."

AGRICULTURE IN CONNECTICUT.

We are indebted to **Wm. Makinster**, Esq., of Middletown, Ct., for copies of the reports of Committees, for the Middlesex County (Ct.) Agricultural Society, at its last exhibition, and also for a copy of the address delivered on that occasion, by Prof. **John Johnston**.

Judging from these documents, which we have no doubt are good evidence in the case, the state of agriculture in that section must be improving. The report of the committee on farms, of which Mr. **Makinster** was chairman, speaks of several farmers who have reclaimed considerable ground by under-draining. Mr. **Asa Hubbard**, is stated to have reclaimed several acres by draining. "Some few of the drains," it is said, "are open; but they are generally under-ground drains, so constructed that the ground can be plowed without injury to them; in short, no one would know that there were any drains if the outlets were not seen. He has so constructed one of the main drains as to carry the water round the margin of the lot, and thus water a strip of land about two rods wide, which produces twice as much grass per acre as the remainder of the field."

Bone manure is stated to have been used with very favorable results by Mr. **Andrew Coe**, of Middlefield. It is said—"he has improved his land and raised good crops where but little would have grown without manure, by using bone-dust. He uses from 10 to 50 bushels per acre, and his crops, this season, show to the satisfaction of the committee, that money for the purchase of bone-dust, as a top-dressing for grain or roots, is well laid out."

The principal departments of the show, appear to have been well filled; the cattle, in particular, are spoken of as having been of superior quality. Among the successful competitors for premiums, we notice the frequent recurrence of the name of **Coe**, and on a particular examination, we find that *nineteen* persons of this name received *fifty-seven* premiums at this exhibition. Verily, "what's in a name?"

Of the address of Prof. **Johnston**, it may be said, without intending a *puff*, that it is of a high character, abounding in sound views in regard to the principles of Agriculture, the physiology of plants, and the composition and action of soils. We should be glad to furnish a more extended notice of it, together with some extracts, but our limits will not admit of our doing this at present.

FACTS AND OPINIONS,

Condensed from Various Exchange Papers.

Three Crops a Year.—Amos Charlton, of Chelmsford, Mass., who sells several hundred dollars worth of farm and garden products from a little more than 20 acres of land, tried an experiment in planting beans with early potatoes, which he says has more than answered his expectations. After plowing and hoeing the potatoes, the beans were planted between the rows, in hills twenty inches apart, and hoed once without plowing. The potatoes were dug at midsummer, and sold for a dollar per bushel. The potato ground was then sown with turneps, thus giving a third crop.

Ashes and Plaster for Manure.—J. Johnston, of Geneva, says that on his soil, which is a gravelly clay, one bushel of plaster will do more good to his clover than 40 bushels of ashes—and that on muck soils he never perceived any benefit from plaster, though ashes may be useful. All the experiments we have tried on sandy and gravelly loam, show the superiority of plaster to ashes, applied to grass lands. J. Johnston also says, that he has found the best way of applying stable manure in autumn, is to spread it over the surface, and plow it in the next spring. This entirely accords with our own experience, whatever hypothetical reasoning may say to the contrary. It is perfectly evident, however, that little evaporation can take place during winter, while much that is soluble may become diffused through the soil.

Exporting Wool.—Hamilton Gay, of New-York, who has had much experience in exporting wool, in speaking of the cost of transporting the products of the great west, to the ocean, says, "Wool forms the only exception. It is worth ten times as much as iron of equal weight, and may be sent forward from the place of its growth thirty times cheaper than wheat of equal value."

Destroying Pea Bugs.—A correspondent of the American Farmer tried a very simple and satisfactory experiment to prevent bugs in peas. Having discovered the egg in each pea while yet in the pod, he gathered them as soon as they were ripe and thoroughly dry, and closed them air tight in bottles. The insect could not grow without air, and next spring not a bug was to be seen.

Rich Artificial Manure.—Samuel Davidson, of Greece, N. Y., obtained one hundred and twenty-two bushels of corn per acre on land to which three bushels of the following manure was applied:—One barrel of human urine, to which was added six pounds of dissolved sulphate of magnesia (epsom salts,) was mixed with enough gypsum to moisten the whole. On another acre which had three bushels of dry plaster, there were ninety bushels. What part of the difference in the crops of these two acres, the mixture produced, would be interesting to know.

Poultry.—A correspondent of the Poughkeepsie Telegraph, had from 30 hens, the past season, up to September 1st, 3,522 eggs, and 200 chickens. The management consists in a warm dry shelter for winter; feeding with oats soaked twelve hours in warm water; and a free supply of burnt clam shells, powdered fine. The chickens are fed with a mixture of two parts of oats and one of rye, ground to meal.

Enjoyment of Life.—Two wealthy citizens of Boston, now considerably advanced in life, were lately conversing in regard to the period when they had best enjoyed themselves. "I will tell you," says one, "when I most enjoyed life: soon after I was twenty-one, I worked for Mr. ———, laying stone wall, *at twenty-five cents per day.*" "Well," replied the other, "that does not differ much from my experience; when I was twenty, I 'hired out' at seven dollars per month; I have never enjoyed myself better since." The experience of these two individuals teaches—1st. that one's happines does not depend on the amount of his gains or the station he occupies; 2d. that very small beginnings, with industry and prudence, may secure wealth.

Hyacinths in Winter.—Hovey's Magazine describes the mode of producing a very pretty effect by growing hyacinths in baskets of moss. An open worked French basket may be procured, the inside lined with moss, and a glass or other dish filled with moss, to hold the bulbs, placed inside. The moss in the dish is to be kept well moistened, but the bulbs must not be overflowed with water, or decay will follow.

Keeping Potatoes.—The Edinburgh Journal of Agriculture says that if potatoes are immersed for four or five days in a solution consisting of an ounce of common liquid ammonia and a pint of water, they may be kept a year without the least deterioration in quality. The ammonia afterwards entirely evaporates, and does not affect the flavor in the slightest degree. If kept immersed a much longer period than jnst stated, the potatoes are injured. The same effect may be produced by immersion in a strong solution of salt; but in this case they require soaking in several successive portions of water, to remove the salt. It is stated, that potatoes treated with ammonia, were kept ten months in a warm kitchen closet, and when used were found perfectly good. T.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Jan. 18, 1846.

FLOUR—Genesee, per bbl., $5.62½—Ohio and Michigan, $5.31¼a$5.44.

GRAIN—Wheat, per bushel, $1.08a$1 17—Rye, 86c.—Barley, 63aa65—Oats, 44a45—Corn, Northern and Jersey, 74a76.

BUTTER—Orange County, per lb., 19a22c.—Western dairy, 12a13c.—Ohio, 7a10c.

CHEESE—Best shipping, per lb., 7a7½c.

BEEF—Mess, per bbl., $8.75a$9.50—Prime, $6 50a$7.25.

PORK—Mess, per bbl., $11.75a$12—Prime, $9.62½a$10.

HAMS—Smoked, per lb., 6½a7½ cts.

LARD—Per lb. (new) 7¾a8½c.

HEMP—Russia, clean, per ton, $215a$225—American, dew-rotted, $115.

HOPS—Per lb., first sort, 9a10c.

TOBACCO—Connecticut, per lb., 10a11c—Kentucky, 3½a4c.

SEEDS—Flax, per bushel, $1.25a$1.28—Clover, per lb., 6½a7c.—Timothy, (herds-grass,) per bu., $2.50.

COTTON—New Orleans and Alabama per lb., 9½a13½c.—Florida, 10¼a12¼—Upland, 9½a12¼ cts.

WOOL—(Boston prices.) Jan 19:

Prime or Saxon fleeces, washed per lb.	38a40	cts.
American full blood fleeces,	32a33	"
" three-fourths blood fleeces,	25a28	"
" half blood do	23a25	"
" one-fourth blood and common,	20a22	"

P. S.—Jan. 26. Since the above was put in type, the steamer Hibernia has arrived at Boston, bringing news twenty-eight days later from England. A very considerable advance has taken place in the price of bread-stuffs, and some rise in the value of cotton. The advance in flour is 5 to 6 shillings sterling per barrel—equal to $1.25 to $1.50—and the advance in Indian corn is from 10 s. to 12 s. per quarter of 480 pounds. The present value of wheat in England is put down at from 80 s. io 86 s. per quarter of 560 lbs. Allowing 60 lbs, for a bushel, this would give the price $2.14 to $2.30 per bushel. Indian corn was 72 s. per quarter of 480. Some excitement was occasioned by the news. In New-York the rise on flour was 75 cents per bbl., and on corn 10 to 12 cents per bushel. In Boston the advance was also as much or more.

……

LIVE STOCK MARKET.

Brighton, Mass., Monday, Jan. 11.

At market 550 Beef Cattle and 200 Stores, 6 yokes of working Oxen, 30 Cows and Calves, 6000 Sheep and Lambs, and about 300 swine.

Beef Cattle.—Extra at $5.75 first quality, 5.25—second quality, $4.05 @ $4.25—third quality, $3.50 @ $4.

Cows and Calves.—Sales were noticed at $17, 18, 20, 21, 28, and $35.

Sheep and Lambs.—Sales of lots at from $1.33 to $2.12, and $1.03 to $2.25, and $3.42.

Swine.—Sales at wholesale at 4½ c. for Sows, and 5½ for Barrows. At retail from 5½ to 6½ c.

We are indebted to Mr. S. H. **Bennett**, for a copy of the Boston Daily Advertiser, containing a statement in regard to the sales at Brighton Market, for the years 1846, 1845, and 1844, as follows:

1846.

38,670 Beef Cattle,	sales estimated at.	$1,198,770
15,164 Stores,	" "	303,280
105,350 Sheep,	" "	162,239
44,940 Swine,	" "	206,824
		$1,871,113

1845.

48,910 Beef Cattle, 13.275 Stores, 107.960 Sheep, 56,580 Swine,	estimated sales	$1,893,649

1844.

37.310 Beef Cattle, 4.136 Stores, 72.274 Sheep, 52.740 Swine,	estimated sales	$1,689,374

ATLANTIC GARDEN AND NURSERY,

Smithtown, Long Island, near New-York.

THE subscribers offer for sale at very low prices, a large assortment of Fruit trees, including Apples, Pears, Peaches, Cherry, Quince, Nectarine, Plum, Apricot, &c., of the most approved sorts Also, the choicest kinds of Gooseberries, Raspberries, Currants. Strawberries, &c., &c

The assortment of Ornamental Trees, Shrubs, and Herbaceous Plants is now very extensive, including over 10,000 Evergreen Trees, and Shrubs.

The stock of Apples and Pears, containing over 35,000 trees, includes the finest sorts in cultivation.

Orders by mail, or otherwise, will recieve prompt attention, and trees will be packed in the the best manner, and forwarded to any part of the country agreeable to order.

Catalogues sent to every post-paid applicant.

Feb. 1—3t. P. DOANE & SON.

ANOTHER GREAT DISCOVERY IN VACCERE-OLOGY.

HOW TO JUDGE A COW.

SINCE the days of Doctor Jenner's discovery of *vaccination*, or the cow pox, being an antidote to the small pox, nothing has appeared so extraordinary in that department of natural history as the discovery by Mr Guenon, the son of a French Gardener, of a means of ascertaining the *quality of milch cows* by external and visible signs over the milk region of the animal.

The signs have been reduced to a clear system, and by committees of various agricultural societies in France pronounced "infallible" after repeated and most careful trials.

The work was translated by Mr. Trist, of the State Department, and published with numerous engravings explanatory of the system, first in the Farmer's Library. But the publishers not willing to withhold a discovery so important and valuable from the poorest person owning, or wishing to own a cow, have published it in a *separate and cheap form*, and it may be had at The Tribune office, or at most of the cheap publication offices in the United States.

While those who have given to this work even the slightest tests, aver that, with it for their guide, they are not fearful of ever again buying an indifferent cow; others, who have been more minute and careful in applying the "signs" to living animals, declare like the French agricultural committees, that the marks are obvious and worthy of every reliance.

The following from sources of unquestionable veracity and pracical knowledge, are submitted in proof of the truth of this wonderful discovery. But, independently of the great value of the cow-book for the purpose in question, other matters attached to it will fully recompense the purchaser for the trifling cost of the book itself, which is but 37½ cents. Booksellers and publishers may be supplied at the usual discount.

Under the operation of this system, which enables every one to select and put aside for the butcher calves that will be sure to prove bad milkers, the *whole race* of milch cattle may be rapidly improved throughout the union. Every great discovery appears to be strange, and some of them incredible in the first instance, and few more than vaccination itself. With such testimony in support of this discovery of M. Guenon, no paper in the Union ought, we would think, to withhold a knowledge of it from their readers.

We have received quite a number of letters from different parts of the country, fully corroborating the theory of M. Guenon. We select for publication the following:

Princeton, Mass., October 15, 1846.

Dear Sir:—I received your favor of the 8th inst., desiring me to state my opinion of the value of M. Guenon's Treatise on Milch Cows, translated from the French. and published in the Farmer's Library. On my first meeting with this treatise, I was impressed with its value from my previous knowledge of some general marks whereby the milking properties of cows may, in some measure be determined, and from the fact that I had myself noticed the oval marks above the hind teats, mentioned by M. Guenon, as indicating good milking qualities, that I immediately commenced the study and application of his method to every cow that came under my observation. I have examined more than 100 cows, and after carefully marking their escutcheons, I have become satisfied that M. Guenon's discovery is one of great merit, and can be relied upon as true. I have no doubt that I can judge very nearly as to the quantity and quality of the milk any cow will give at the height of her flow, and also the time she will continue in milk after being with calf.

The way taken to convince myself of the truth of M. Guenon's method has been to visit the cow-yards of some of our principal dairy farmers, and examine the escutcheons and marks on their cows, and make up my judgment as to the quantity and quality of milk each cow would give at the height of her flow, and how long she would continue in milk after being with calf; then inquire of the owners how much milk their several cows would give at the height of their flow, and how long they would hold out after being with calf; comparing the owner's account with my own judgment. I find I have mistaken in only five cases out of more than one hundred examined.

I have great confidence in M. Guenon's method of testing the milking properties of cows and consider it one of the great discoveries of the age. The advantage of this discovery to our dairy farmers, enabling them, as I think it does, to determine the milking properties of their young stock at an early age, must be very great, and will be appreciated by every one who is in the slightest degree acquainted with the subject. In my opinion, no dairy farmer, after acquainting himself with M. Guenon's discovery, need possess himself of a bad milking cow.

M. Guenon informs us that his system is applicable to calves three or four months old. I have traced the escutcheons upon calves as early as two or three weeks old, and see no reasons why their value as future milkers may not be judged of at this age as well as at any other age. Yours, respectfully,

To J. S. Skinner, Esq., JOHN BROOKS.
Editor of the Farmers' Library, New-York City.

Patterson, N. J., Dec. 19, 1846.

Dear Sir:—I have read with great satisfaction, M. Guenon's work on Milch Cows, by which one can judge by certain infallible signs, the milking qualities of the animal. I have compared the marks he gives for his first grade Flanders Cow, and find they correspond with the escutcheon of my favorite Devon cow Ellen, that has taken the first premiums at the last two cattle shows of the merican Institute. My farmer has great faith in M. Guenon's rk and so has one of my neighbors, a knowing Scotch milkn, who keeps fifty cows. He says that after careful examination, he places confidence in these marks, and they will govern him in his future purchases.

I return to you my sincere thanks for giving to us farmers this valuable treatise of M. Guenon's. I shall hereafter make my selection of the calves I will raise from my choice stocks, from the marks given by this author. I think every farmer should own this work. With regard, yours, &c., ROSWELL L. COLT.
To the Editor of the Farmers' Library.

The above work is published and sold by GREELEY & M'ELRATH, New-York, publishers of Skinner's Farmers' Library and Monthly Journal of Agriculture.

☞ Three copies sent by mail for $4.00.

SCIONS OF FRUIT TREES.

WM. R. PRINCE & CO., will furnish from their extensive specimen orchards, assortments of scions for ingrafting during the winter, on the following terms, and they deem the scions from their trees invaluable for nurserymen, on account of their superior accuracy. Collections comprising 40 or more varieties at 25 cents each, the number of grafts in proportion to their rarity; but when a full dozen are desired of each, the price will be 50 cents. Smaller assortments will be 50 cents each variety. These terms apply only to those trees whose price does not exceed 50 cents each in the catalogues; those higher priced will be charged at the same rate for a parcel of grafts, as for a tree. Cuttings will also be supplied of all trees and shrubs which can be propagated by that mode. They will be packed in a superior manner.

Prince's Linnæan Botanic Gardens and Nurseries, Flushing,
Feb. 1, 1847.—1t

STRAW AND CORN STALK CUTTERS.

HOVEY'S Patent Spiral Straw and Corn Stalk Cutter, for hand or horse power, five sizes, from $8 to $25.

Also, Stevens' Spiral Hay and Cornstalk Cutter—ten sizes. Cuts 1 to 2½ inches long; $8 to $20. Rigged for horse-power, $1 to $2 extra.

Also, the Pennsylvania Hay and Cornstalk Cutter, for horse-power. This crushes the stalks, and when cut ½ an inch long, they become fine like chaff; price, $25. For hand-power, $16. The last two are the best in use for stalks.

Bott's Cornstalk Cutter—price, $20.
Langdon's Hay and Cornstalk Cutter—price, $18 and $20.
Cheap Cutting Boxes, $5 to $5.50.

For sale at the Albany Ag. Warehouse and Seed Store, No. 10 Green-st.

LONG ISLAND HORTICULTURAL SOCIETY.

AT the annual exhibition of this society, held in Flushing, on the 17th, 18th, and 19th of September, 1846, the following premiums, among others, were awarded to WM. R. PRINCE & Co., Proprietors of the Linnæan Botanic Garden and Nurseries.

Fruits.	
To Messrs. Wm. R. Prince & Co., for the best 12 varieties of Apples,	$5.00
To Messrs. Wm. R. Prince & Co., for the largest and best collection,	5.00
To Messrs. Wm. R. Prince & Co., for the best 12 varieties of Pears,	8.00
To Messrs. Wm. R. Prince & Co., for the largest and best collection,	8.00
To Messrs. Wm. R. Prince & Co., for the best 6 varieties of peaches,	3.00
Flowers.	
To Messrs. Wm. R. Prince & Co., for Achimenes picta, showing high cultivation,	2 00
To Messrs. Wm. R. Prince & Co., for the best 30 varieties of cut Roses,	*Certificate*

PREMIUMS AWARDED TO WM. R. PRINCE & Co.,

At the Fair of the Queens County Agricultural Society, on the 9th of October, 1846.

For the best and Greatest variety of pears;
For the best and greatest varieties of apples;
For the best 12 table apples;
For the best and most beautiful bouquets;
For the best and greatest display of flowers.

Feb. 1, 1847.—1t.

NEW SEEDS.

JUST received at the ALBANY AG. WAREHOUSE and SEED STORE, a full and large assortment of

FIELD, GARDEN, AND FLOWER SEEDS,

of the growth of 1846. The above seeds having been grown and put up with the utmost care for this establishment, they are warranted genuine and true to their names. Farmers, gardeners, and dealers will find it for their interest to examine the assortment and prices before purchasing elsewhere.

Also for sale as above,
Jewett's Improved Canada Corn,
Black Sea Spring Wheat,
Hall's Early and Carter Potatoes, &c., &c.

LUTHER TUCKER.

FARMER WANTED.

WANTED a man with his wife, (one without children would be preferred,) to take charge of a farm of about 200 acres, in one of the pleasantest districts in New-England. The wages would be good and the situation probably a permanent one. Address, (*post-paid*,) box No. 1668, Post Office, Boston.

Jan. 1—2t.

NEW-YORK AGRICULTURAL WAREHOUSE.

(ON COMMISSION.)

A. B. ALLEN, 187 Water-st.—Farming Implements and Seeds, Wire Cloths and Sieves; Fertilizers, such as Guano, Lime, Plaster of Paris, &c.; Fruit and Ornamental Trees and Shrubs; Improved Stock, Horses, Cattle, Sheep, &c.

Editor of the American Agriculturist, a monthly publication of 32 pages, with numerous engravings. Price $1 a year.

Jan. 1—2t.

NEW ORLEANS AGRICULTURAL WAREHOUSE.

THE subscriber will keep constantly on hand for sale farming and plantation implements, of all kinds suitable for the southern market. He will also execute orders for improved stock, such as horses, cattle, sheep, &c., and receive subscriptions for the American Agriculturist, a monthly publication of 32 pages, with numerous engravings. Price $1 a year. R. L. ALLEN.

New Orleans, Jan. 1, 1847.—2t

TO WOOL-GROWERS.

THE subscribers have a tract of land lying in Patrick Co., Va., consisting of about *ten thousand acres*, which they wish to sell or rent. It has on it immense quantities of the largest timber, with abundance of water, and water power. A portion of the land has been cleared, and produces the finest grass in the world. We would like to dispose of it, or to enter into partnership with any gentleman who would furnish a flock of sheep, and go into the business of growing wool. Apply by letter to either of the subscribers, at Cumberland Court House, Va., or in person to Col. A. Staples, Patrick Co., Va., who will show the land.

WILLIAM W. WILSON
WILLIS WILSON.

Sept. 1—6t.

AGRICULTURAL WAREHOUSE.

183 *Front-st., New-York.*

THE subscriber offers for sale an extensive assortment of Farming and Gardening utensils, consisting in part of plows of Freeborn's, Minor's, Horton & Co.'s, Prouty & Mears', and Ruggles, Nourse & Mason's patterns. The Locked Coulter, and Wrought Share Plow.

Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Straw Cutters, of Greene's, Hovey's, Eastman's, and other most approved patterns.

Horse Powers, Threshing Machines, &c. Gin gear, Mill, Horse-power, and all other castings, constantly on hand. Also a general assortment of Brass, Copper, and Iron Wire Cloth, for Paper, Rice, and other mills. Seives, Screens, Riddles, &c., &c.

Persons ordering articles from the subscriber may depend upon having them made of the best materials and in the most workman-like manner.

JOHN MOORE.

New-York, Oct. 1, 1846—6t

TO NEW-YORK FARMERS AND EMIGRANTS.

ONE hundred and fifteen thousand acres Illinois Lands for sale, in tracts of 40, 80, 120, 160 acres, or more, to suit purchasers. The lands are all first rate, and among the very best in the state, and are situated in the counties most densely settled, viz., Morgan, Scott, Cass, Mason, Menard, Green, Sangamon, Logan, Christian, Mason, McLean, Woodford, and Macoupin. To actual settlers every reasonable indulgence will be given as to time of payment. The price from $3 to $5 per acre.

A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

" *Beardstown, Cass Co., Ill., Jan.* 10, 1846.

THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

" A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

" Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYRES, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG.

Jan 1, 1847.—6t No. 9 North Fourth-st., Philadelphia.

WILD TURKEYS.

FOR sale, two pair of wild turkeys—one pair of which were sent from Illinois in the fall of 1844, and the others were reared from them the present year. They are well domesticated, and are splendid birds. Price, $10 per pair. Inquire at the OFFICE OF THE CULTIVATOR.

Dec. 1—2t.

WIRE CLOTH SIEVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

July, 1846—10 mos. 191 Water-st., New-York.

P. S.—All kinds of wire work manufactured to order.

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by E. K. COLLINS & Co., 56 South-st.

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano.

Sept, 1, 1846.—tf

I. T. GRANT & CO.'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hopes to be enabled hereafter to supply promptly the rapidly increasing demand for that article. These mills have been repeatedly tried, and the principle upon which they operate thoroughly examined and tested by committees appointed by the State Agriculutral Society, and in every instance have been declared greatly superior to any that have come in competition with them. They have taken the *first premium* at four of the New-York State Agricultural Fairs, (being all at which they have been exhibited.) and at the State Fairs in Pennsylvania and Maryland. Our mills took the first premium, and we were awarded a silver medal for the new improvement, at the Fair of the American Institute in 1846, and they received the highest consideration at the great National Fair, recently held at the city of Washington. Wherever they have been exhibited, they have received the unqualified commendation of agriculturists, and are believed to be the only mills ever invented or manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle, and *smut* at the same time. They will also thoroughly clean all other kinds of grains and seeds by running it through once. We manufacture four sizes, varying in price from $21 for No. 1, to $27 for No. 4, and have no hesitation in warranting them superior to anything of the kind now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premium wherever exhibited.

Our Fan Mills and Cradles are for sale at factory prices at the following places:

John Mayher & Co., 195 Front-st., New-York.
E. Whitman, 55 Light-st., Baltimore;
Denslow & Webster, Savannah, Geo.;
Fitzhugh Coyle, Washington City;
Baggs & Parsons, Springfield, Mass.;
Pierce, Sweet & Co., Burlington, Vt.;
J. W. Howes, Montpelier, Vt.;
Luther Tucker, 10 and 12 Green-st., Albany, N. Y.
H. Warren, Troy;
J. S. & J. Brown, Newburgh.

Orders thankfully received and promptly attended to, and all goods delivered at Troy, N. Y., free of charge.

I. T. GRANT & Co.

Junction P. O., Rens. Co., N. Y., Jan. 1.—tf

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 and 52 North Market-Street, Boston.

FOR sale at this establishment, a general assortment of Agricultural and Garden Implements—Howard's Improved Patent Cast Iron Plows of all sizes. Martin's improved Eagle and other Plows; Double Mould Board, Side-Hill, Paring, and other plows, in great variety, and of the most approved patterns. Howard's Subsoil Plows, Cultivators of different descriptions; Willis' Seed Sower, (the best in use;) Geddes' and other Harrows of various patterns; Green's Straw-Cutters, Willis' Straw-Cutters, of various kinds and prices; Gault's Patent Churns, Grindstones or Friction Rollers; Cast Iron Field Rollers, (a very superior and substantial article;) Garden Rollers of cast-iron, different sizes; Iron Rakes of every size and variety; Garden Trowels, Syringes in great variety; Pruning and Budding Knives; Pruning Scissors, and Shears in great variety; Grass Hooks and Garden Shears; Garden and Field Hoes of every pattern; Scufflers every size; Pick Axes, Shovels, Spades, Dung and Garden Forks of every description; Hay Tools, including the very best Scythes manufactured in the country, (in all cases warranted;) Hall's and other Hay Rakes, Pitch-forks, Grain Cradles, Horse Rakes, Sickles, Austin's Rifles, Whet Stones, &c., &c.

Also a complete assortment of Chains, viz:—Fence Chains—Trace do.—Ox do.—Dog do.—Tie-up do. Hale's Horse Power; Hale's Threshing Machine and Winnowing Mills, Garden Engines, &c.

Also Axes, Hatchets, Bill Hooks, Hammers; Axe, Hoe, and Rake Handles; Ox Yokes, Bull Rings; together with every other article important for Agricultural or Horticultural purposes.

Harris' Paint Mill, the best in use, is also for sale at this establishment.

SEEDS, TREES, AND PLANTS.

The subscribers are enabled to furnish seeds of the purest quality, of every variety of field, vegetable, and flower seed; embracing every variety desirable far cultivation.

Also, Fruit, Forest, and Ornamental Trees and Shrubs, of every description.

☞ Orders promptly attended to. JOSEPH BRECK & Co.

Boston, Sept. 1—tf.

CORN AND COB MILLS.

SINCLAIR'S Patent Corn and Cub Crusher, for one horse, or more power—feeds one ear at a time. Price, with extra plates, $30.

Pitts' Patent Corn and Cob Cutter. This is, probably, the easiest operating machine in use. The cutting is done by a series of knives or chisels; feeds one ear at a time. For description see January number Cultivator, 1847. Price $40.

Freeborn's Patent Corn and Cob Crusher. This has a large hopper, and feeds itself—requires two or more horse-power—is an effectual machine. Price $30; with extra plates, $32. The above constantly on hand at the Albany Ag. Warehouse, Nos. 10 and 12 Green-st.

FARMERS', GARDENERS', AND PLANTERS' STORE.

A. G. MUNN, Louisville, Ky.

500	BUSHELS	clean Ky. Blue Grass;	All warranted crops of 1846.
500	"	" " Orchard Grass;	
300	"	" " Red Top;	
200	"	Red Clover;	
100	"	Timothy;	
200	"	Hempseed;	
200	"	Barley:	
200	"	Rye;	
100	"	Heavy Seed Oats, 40 lbs. to the bushel.	

Also Lucerne, Millet, White Dutch Clover, Potatoes, Artichokes, Beans, Yams, Apple Seed. Peach Seed, &c., &c., together with a large stock of GARDEN SEEDS, by the pound, ounce, or paper, or put up in boxes to suit any market. A liberal discount made to dealers.

Also, a large stock of Agricultural Implements, such as Plows, Harrows, Cultivators, Churns, Corn-Shellers, Straw-Cutters, Fanning Mills, Hoes, Rakes, Spades, Shovels, Axes, Trace Chains, &c., &c., together with all the tools of the Horticulturist and Gardener.

Orders from abroad will meet with prompt attention.

N. B Agen for nurseries, east and west.

Mr. Munn will also act as Agent for "The Cultivator, and "The Horticulturist, and receive subscriptons and monies for both these works.

Feb. 1, 1847.—1t.

CORN SHELLERS.

CONSTANTLY for sale at the Albany Ag. Warehouse and Seed Store. No. 10 Green-street,

Burrall's Hand Corn Sheller and Separator, a new and very compact machine, one of the very best in use.—$10.

Clinton's Hand Corn Sheller, the most rapid and formidable machine ever offered in this market; does not separate the cobs and corn. Price, $10.

Warring's Hand Corn Sheller—shells very rapidly, but does not separate the corn and cob; a cheap and durable machine. Price, $9.

Smith's Corn Sheller and Separator, for horse-power, capable of shelling ten to twelve hundred bushels per day.—$50.

TO PLANTERS.

WANTED, situations by two well experienced farmers as overseers, who will take charge of a part or the whole of Plantations. The best of references will be given.

Address FRANCIS F. NILES,
Farmington, Ct.
Feb. 1, 1847—1t.*

BURR STONE MILLS.

THE subscriber has received a supply of Fitzgeralds' Portable Patent Cone Burr Stone Mills. for grinding wheat, corn, salt, coffee, spices, drugs, &c. This mill being made of the French Burr Stone, which on account of its hardness and sharpness of grit, is the best material for grinding, is also hung or moves on steel centres, and is very little affected by use; and when it does need sharpening it can easily be done, and in a few minutes, owing to its small size and form. This mill has taken the premium three years in succession at the Fairs of the American Institute, two years at the Franklin Institute, and all other exhibitions and fairs where it has been exhibited. The following from the many testimonials received in its favor, are sufficient to show the capacity and utility of the machine:—

"We the undersigned being present at an exhibition of Fitzgerald's Portable Burr Stone Mill, give the following as the results: Attached to the steam engine, it ground and bolted, with six horse power,

Wheat	at the rate of one bushel in	5	minutes.
Corn	" "	9½	"
Black Pepper	" "	6½	"
Allspice	" "	8	"
Coffee	" "	5	"

We omit any recommendations of this recent invention, as being altogether unnecessary. The simple facts above stated, and an examination of the mill, will have more weight than anything we can add.

Edward Earle, M. D., 70 Chistopher-st., N. Y.
Archibald McVicar, Jr.
Abraham Van Est, cor. Bleecker and Catharine-sts.
Joseph Varick, 83 Amity-st.

New-York, April 22, 1846.

☞ The above mills will be constantly on hand and for sale at the Albany Agricultural Warehouse and Seed Store. Nos. 10 and 12 Green-street, Albany, N. Y. LUTHER TUCKER.

Feb. 1, 1847.

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THE CULTIVATOR

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HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing. Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price, $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.

Albany, Jan. 12, 1846. LUTHER TUCKER.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

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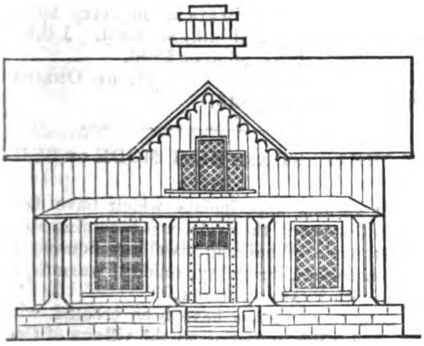
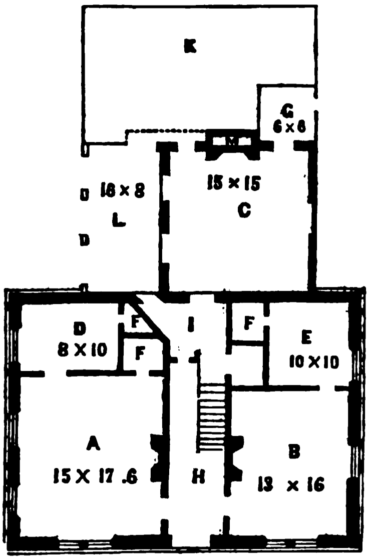
RURAL ARCHITECTURE.

EDITORS CULTIVATOR—In your favor of the 7th inst., you extend to me an invitation to send an article for the Cultivator. It is entirely a new business to me, and I may fail in sending you anything that you will think worthy of insertion. Should this be the case, you will do me a favor not to use it. In looking for a subject, my mind fixed upon two or three, which I deem of general interest. These were Roads, Fences, and Buildings. Having several plans of dwelling houses in my memorandum book, I have selected one, and attempted to give you a draft of it. I am not a mechanic, and feel that I am laying myself open to criticism. I have been led, perhaps, to select this subject from having recently re-perused Mr. DOWNING's works on Cottage Residences and Landscape Gardening, in which works I have been much interested. I have access to no works treating on the same subject that I read with more satisfaction. I like them better than Loudon's, because they are better adapted to our own country. But still it seems to me there is something needed to meet the wants of the mechanic and farming community—I mean the working portion—men who manage their own tools, and work their own farms. Mr. DOWNING's Designs and Plans are too expensive for general use among this class of persons; they will do for what are termed gentlemen farmers, and mechanics who work, if at all, in gloves; but we want something for the industrious working man. A man who has a farm of fifty or one hundred acres, worth $30 to $40 per acre, does not like to expend 12, 15, or $2,500 in building a dwelling house; and if he is a prudent man, will not do it; and yet, he wants a comfortable home, and deserves it as much as any one. Of a hundred dwelling houses, in view from where I am now writing, perhaps not more than fifteen or twenty would be considered worth over $1000; and these, I should judge, are rather above the average of our country. This, I think, shows, that a work containing designs of a less expensive character is needed to meet the wants of a large portion of our population.



ELEVATION.—Fig. 18.

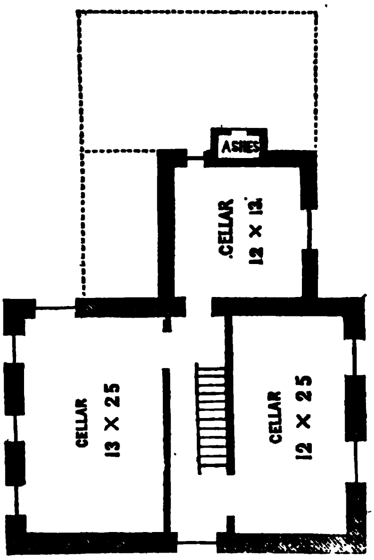
Mr. DOWNING, in an article published in the Sept. number of the Horticulturist, complains of the manner in which the Grecian and other styles of architecture have been misapplied in this country, and says he now "sees strong symptoms of another disease manifesting itself," &c., alluding to the rural Gothic style of building, as now practiced among us. Hasnot his work on Cottage Residences had this very effect to some extent. Persons have seen his work and designs, and have been pleased with them, and in building have endeavored to imitate them; but not feeling able to fully adopt his plans and carry them out, they have tried to introduce some of his suggestions in a cheap way, and have thus produced the specimens of bad taste to which he alludes. For one, I do not wish to see any particular style generally adopted. It would not comport with our heterogeneous population, or our great variety of



PRINCIPAL FLOOR.—Fig. 19.

A. Parlor,—B. Sitting-room—C. Kitchen—D. and E. bed-rooms—F. Closets—G. Pantry—H. Hall—I. Back Hall, lighted from sash door—K. Wood-house—L. Stoop—M. Ashes.

scenery. We want variety—plans fitted for various locations, and this can be arrived at better by using a variety of style. In connection with the work published by Mr. DOWNING, is there not wanting another, to furnish that portion of the community to which I have referred, and who can better supply it than Mr. D. himself?

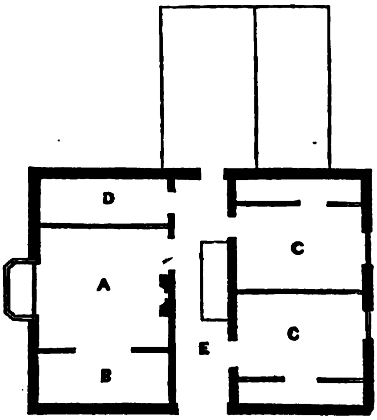


CELLAR.—Fig. 20.

In looking over the buildings now in my view, I should judge they would average about the size of the plan of the one I now send you. It is designed for a family of from six to ten persons; and I think the arrangement is such as would be convenient and desirable.

In different portions of our country, different materials are used in building, and different uses are made of the same materials. At the west, there are many buildings put up with what are called balloon frames, covered with boards and clapboards. With us clapboards are generally used as an outside covering upon the ordinary timber frame. Mr. ELLSWORTH highly recommends the *Pise houses* of unburnt brick. Mr. DOWNING has introduced the vertical board covering. Among these, I like Mr. D.'s best, both as to the appearance and utility. The main objection to it is, that it is too expensive, particularly if it is filled in with brick, as Mr. D. recommends.

In the plan I send, you will see I have adopted Mr. Downing's covering for the outside, but propose to use it as follows: Let the cellar walls be built up with stone from two to three feet above the ground, putting a good coat of water cement on top of the wall to prevent dampness from arising—then lay up the walls of unburnt brick, as recommended by Mr. Ellsworth, in his Report on Patents for the year 1844, putting in scantling 3 by 4 inches, on the outside, once in three feet, around the entire building, to nail the vertical boarding to, when the walls are finished. This embraces part of Mr. Downing's and part of Mr. Ellsworth's improvements. The objection I have to Mr. E.'s covering of cement, is the difficulty of making it stand our climate. Using Mr. D.'s covering, obviates this objection, and in combining the two we have something about as near perfect as we can look for. You will observe, also, that it is cheaper than a frame of timber, as all the timber that is necessary to use is the joists for flooring, and the scantling outside, until you reach the plates. The expense of walls of unburnt brick is about six cents per cubic foot. The two principal partitions should be of unburnt brick, six inches thick, to be carried from the cellar to the roof, plastering inside immediately upon the brick. This saves more than one-half the expense of plastering. In such a building, we have the advantages of its being warm, dry, and clean. It is warmer than brick or stone, because a better non-conductor of cold, or than wood alone, because tighter. Another advantage in such a wall is, that no rats, mice, or other vermin, can get within the walls; as they almost always do in every house where studding, or furring and lath, are used. I think such a house can be built for $600 or $800.



CHAMBER FLOOR.—Fig. 21.

A. Chamber, 14 x 15—B. Recess for bed, opening into A—C. Bed Rooms with closets, 9 x 13—D. Closet opening into Hall—E. Hall

H. OF ONEIDA CO.

Clinton, Dec. 31, 1846.

THE CHEAPEST AND BEST MODE OF BUILDING.

From various experiments which have been made within a few years, the evidence is becoming strong, that the best mode of building dwelling houses, for combining cheapness, durability, solidity, warmth, and dryness, is with UNBURNT BRICK.

A number of houses have been erected with great success with this material, at the village of Geneva, in western New-York, within a few years; and their superiority has also been proved at Chicago, as appears from an able and interesting communication on this subject, which appeared a few weeks since in the Prairie Farmer. In both these localities, the cheapness, as well as other advantages, which, from the statements of different builders, nearly agree, are very apparent and striking.

These houses being of a more porous material than stone or brick, are much warmer, and less subject to dampness, and not being lathed internally, except on a part of the partition walls, afford very few hiding places for rats and mice. They are also far less liable to destruction by fires for the same reason. In order that their advantages may be more fully understood, a brief statement of the mode of erection may be useful.

The bricks are made of good clay, with which a small portion of sand must be mixed, the quantity of which will vary with the purity of the clay. Straw or coarse grass is then chopped with an axe about six inches long, and worked in with the clay. A yoke of oxen will work a bed of clay in about four hours sufficient to give employment to two active men in making the brick for a day. The size of the brick is usually quite large, or six inches thick, one foot wide, and fifteen inches long. At Chicago they are usually made eighteen inches long, with a few a foot long to break joints, &c. There are two modes of loosening the bricks from the mould. One is to have a sliding bottom; the other, and perhaps the best, is to have a narrow slit or opening at each end of the bottom, which admit air, so that when inverted the brick readily falls out from its own weight. The side pieces should project beyond the ends, to receive cross rods for handles. Two men will make three hundred in a day. They soon become dry enough to be set on edge, then on end, and lastly in piles one above another, the asperities of the surface admitting freely the circulation of the air between them. In a few weeks, if in summer, they will be hard, tough, and dry enough to lay in the wall. The mortar is made of the same material as the brick, and cements the wall firmly together. The building may be very expeditiously performed.

The walls must in all cases be laid on stone or hard brick underpinning or cellar wall, and should commence two feet above the surface of the ground. The partition walls may be made of unburnt brick, six or eight inches thick, but if a cellar is beneath, or otherwise, partition walls of stone or hard brick, must invariably form the foundation. A fine house in Chicago, where a cellar could not be dug, had all the partitions of the same material, so that neither rats and mice, nor fire, could pass from one room to another except through the doors. A *cellar* adjoining was built on the surface of the ground, three feet lower than the main floor, and in addition to the exterior wall a foot thick, it had another within, six inches thick, enclosing an intermediate space of air. It never froze in winter, and formed an admirable cellar.

The wood work is connected with the walls according to the usual mode in brick and stone houses, and the unburnt bricks receive and hold firmly all nails driven into them.

The plastering on the inside, which is applied directly to the walls, must be quickly finished, as it dries with great rapidity. After the building has stood one year or more, a coat of plastering, similar to that given to other brick and stone houses, is applied outside, which, if well done, and of good material, forms a handsome finish.

According to the article in the Prairie Farmer, the cost of the wall itself, compared with that of a common brick wall of equal thickness, is as 5 or 5¼ to 14 or 15; or but little more than one third. As lathing the interior is obviated, the cost of the inner plastering is reduced to one-half. And a handsome outside cement is about two-thirds as expensive as three coats of white paint, and needing no subsequent renewing, is less than half as costly in a series of years. An acquaintance who lately erected a house of this kind with accurate bills of outlay, estimates its total cost at two-thirds that of a common wood frame house, and one-half that of a common brick house, while he considers it superior in excellence to either.[*] He drew the brick one mile to the place of building. Where suitable clay cannot be had within several miles, the increased distance would very slightly augment the expense. T.

WARMING HOUSES.

......

The fire place has very generally gone out of use, wherever fuel has become costly, and stoves of various kinds have taken its place.

Though the old brick fire-place, with its wide throat, consumed large quantities of wood, and sent a large proportion of the heat generated in its combustion up chimney by the powerful draft—it certainly, by that very process, ventilated the apartment in great perfection. The open Franklin stove, was also a good ventilator, and by having its plates exposed on all sides to the air in the room, it saved fuel.

The close stove is defective as a ventilator. All close stoves are upon the same principle, and the modern "air-tight" is only a common close stove *well put together*. Combustion is slow, and but a very small quantity of air is required to support it. The process is to make wood into charcoal, and use the heat thus generated in warming the room—and then consuming the charcoal and diffusing the heat given off in its consumption. This is economy of heat, and is the most perfect mode of making every particle of it available; and if the pipe of the stove is long enough to allow the small quantity of air that is necessary to support combustion, to become as cold as is consistent with its moving at all through the pipe, it may be considered equal to anything now in use for the purpose of saving heat. It is manifest that such a stove does not ventilate the apartment sufficiently to render the atmosphere wholesome, and unless other means are resorted to in order to introduce fresh air, it becomes so impure that headaches follow. The only way is to procure a supply of fresh air, and by appertures near the ceiling let out the impure heated air. This fresh air thus introduced, is cold, and to heat it will cost fuel—and thus if pure air is enjoyed, the great economy of the "air-tight" stove is in a measure counterbalanced, by the necessity of ventilating with cold air.

Thus it is shown that the most common modes of warming buildings are objectionable. One is expensive, the other is destructive of health. The advantages of both may be secured, and their disadvantages avoided by warming and ventillating the house with heated air

I have a furnace in the cellar of my house that accomplishes both these ends—a drawing of a section of which I send you. [*See fig.* 22.]

An air chamber made of brick, the walls eight inches thick, and arched over at the top—five feet four inches long, and three feet wide on the inside, and high enough to allow a stove *B*, with drums, *C*, *C*, to stand on it under the arch. The front end of the stove is even with the outside of the wall, that wood may be introduced, and in the door is a sliding damper, to control the draft. The cold air is introduced into the air chamber at the front end of the stove in such a manner as will bring it directly in contact with the heated surface of the stove. Tin pipes, *D*, *D*, ten inches in diameter, convey the air after it is heated through the floor into the rooms above. At the ends of the pipes in the floors are registers, to regulate the quantity of air admitted into the rooms. The smoke pipe *E*, passes through the top of the arch, surrounded by a pipe, up to the floor, where a sheet of iron, having holes through it, controls the amount of air allowed to enter the room through which the smoke pipe passes. But two air pipes are shown in the drawing, but there are, in fact, six rooms that have hot air introduced into them, besides the hall which is warmed by the smoke pipe. The cold air is brought from the outside of the cellar wall by a brick pipe, *A*, a foot square, passing under the cellar floor. This cold air pipe is so situated that the supply can be regulated by partially closing the outer end. The drums, *C*, *C*, have small doors at *F*, *F*, through which a scraper can be introduced to clear out the ashes and soot, by sending them down through the pipes, *H*, *H*, into the stove. There is in the brick wall at *I*, an iron door opening on the back side of the air-chamber, through which a man can enter.

The operation of this furnace is this: The fire being started in the stove *B*, and heating it, and the drums, the surrounding air is heated and expanded, and by a

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[*] He also stated that during the two years that elapsed from the time the house was built, to the period when the outside plastering was applied, only about one-tenth of an inch of the surface of the brick was beaten off by storms and rain.

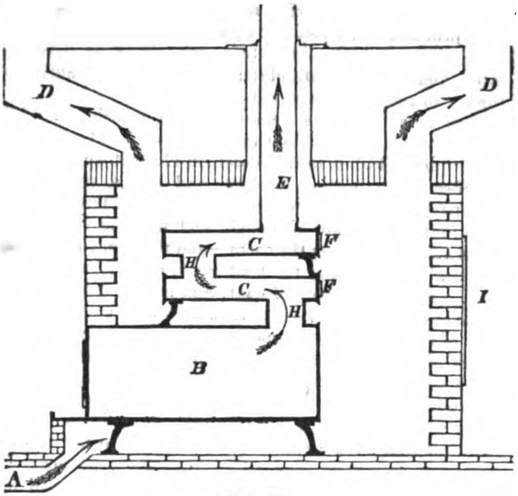

Fig. 22.

well known law, it rises and passes through the pipes *D*, *D*, into the rooms above, where it diffuses itself, and a constant stream coming into the rooms, presses the air until it begins to escape through the cracks around the windows and doors. Thus, instead of having streams of cold air pouring in at all the crevices, air that has been contaminated by use is forced out by the mechanical power of the heated air; and the room is constantly supplied with pure air drawn (not from masses of decaying vegetables in the cellar, but) from out doors.

Before the erection of this furnace, it was necessary to calk the windows, and list the doors, and then suffer with the cold. Candles flared, and it was nearly impossible to be comfortable in cold weather. Now the lights burn straight, and though the thermometer may stand at zero in the open air, there is no difficulty in keeping it at seventy or eighty degrees any where in the lower story of the house, which is fifty feet square.

The coldest weather in winter requires about a cord of seasoned hard wood to warm the house a week.

Having tried fire places and tight stoves, and having had this furnace in use long enough to give it a fair trial, I feel justified in making comparisons between these modes of warming houses. By the furnace, besides warming a large house perfectly, is saved the dust and ashes of the stoves or fire places—the dirt of the wood-boxes, the cleaning of brass fenders, the destruction of furniture, and the labor of constantly mending fires. The stove in my furnace is more than four feet long, and is two feet wide, and two feet high, and the door is large enough to allow the introduction of common cord wood, thus saving sawing and splitting. Wood being put into the stove—the quantity varying with the weather—the damper is closed, and every joint being as close as it is possible to make them—combustion goes on slowly, and the great amount of wood thus burning, gives off sufficient heat; and three fires are generally enough for a day in cold weather. The wood being stored in the cellar, the dirt is kept out of the rooms.

It would be an improvement upon this furnace, to put more drums upon the stove, and to have a stove three feet high, so that there might be a grate made of tubes, passing through the side plates, so that the air in the air chamber could circulate through the grate, and thus save more heat. The front of the stove, instead of being even with the front wall, might be just within the air chamber, and a sheet-iron door in the brick wall opening in front of the stove, would permit the opening of the stove door, and the introduction of wood. By this means the door of the stove would aid in heating the air, and the expansion and contraction of the stove by heating and cooling, would not crack the wall, as it does when the stove is masoned into the wall.

Before erecting my furnace, I made somewhat extensive examinations, for the purpose of procuring information in relation to this matter. I saw many furnaces that but partially answered the object of their erection. The failures were to be ascribed to the attempt to draw a supply of cold air either from the cellar, or from the rooms above, or the tube through which the cold air was brought from out doors was too small—or the air chamber was very large. Every furnace that worked well that came under my observation, was supplied with cold air from the outside of the building by a pipe of at least eight inches square.

Large stoves, and large pipes to convey the heated air are preferable—as thereby a great quantity of air moderately heated will be conveyed to the rooms. Where small stoves and small pipes are used, the fire must be intense, and the plates of the stove must be made very hot, and consequently excessively heat the small quantity of air that comes in contact with them. The impurities that float in the air thus undergo changes that render them anything but pleasant to the senses. GEO. GEDDES.

Fairmount, N. Y., Jan. 1847.

LARGE FARMING ON A SMALL SCALE.

THE first premium on farms, of the Middlesex (Mass.) Agricultural Society, was awarded the past season to Amos Carlton, of Chelmsford. The manner in which he has, in the space of a few years, brought a farm of twenty-eight acres, mostly covered with woods, birches, and alders, and huge rocks, to a state of high cultivation, so as to yield several hundred dollars worth of farm products yearly, can hardly fail to be interesting.

Twelve years ago, when he purchased it, there were but seven acres; the other twenty-one he has bought at different times since. The soil is a hard gravelly loam, very stony; not one acre could be turned smooth with the plow. Improvement was commenced on an acre and a half, by digging out stone enough to fence it with double wall. Since he has had the place, he has laid about 430 rods of wall. He formerly bought some manure, but now thinks he can make it cheaper. He finds meadow mud, well mixed with a seventh part ashes, and a quarter stable manure, quite as good as clear stable manure. At first he had but two cows and one horse; now, by the improvement in the fertility of the land, he keeps one horse, four cows in summer, and five or six in winter, with three heifers, and three pigs.

He cut eighteen tons of hay the past season from his meadow. Three years since he built a barn and carriage house, which was forty by forty-eight feet, "which," he says, "I then thought was larger than I should ever fill; but I have this year had to add twelve feet more to one end."

He has given much attention to fruit. The original orchard of natural trees he grafted, and they are now in full bearing condition, and he gets four times as much good fruit as he did before of bad. In 1845, he had 120 barrels of apples; in 1846, about 80, and 10 or 12 bushels of quinces, besides a fine supply of peaches, cherries, grapes, &c.

The amount paid for labor, including wall-building, has, of late years, been about 140 dollars per year. The produce *sold*, according to account, was, for 1845, including fruit, milk, hay, &c., 641 dollars 25 cents. About one quarter of his 26 acres is covered with rocks.

This account is condensed from his statement to the committee of the agricultural society, who examined the farm, as published in the Boston Courier. T.

EMIGRATION TO VIRGINIA—FAIRFAX COUNTY LANDS.—By an Emigrant.

It was at the close of a bleak, windy, and gloomy October day—the temperature below the freezing point—and the elements giving legible tokens of the approach of the dreary and almost interminable northern winter, that with my family and a goodly assortment of carpet-bags, which we had contrived to substitute for those most troublesome and vexatious of all appendages, travelling trunks, I took passage in the noble steamer "Knickerbocker," from the Albany wharves, for the great metropolis—from whence it was my intention to proceed by the Camden and Amboy railroad, Philadelphia, Baltimore, and Washington, to some point south of "Mason and Dixon's Line," in pursuit of health, and to escape the rigors of the coming season. Ten years constant confinement within the pent up walls of the city, and an unintermitted devotion to sedentary occupations and literary pursuits, had served effectually to undermine a constitution naturally not the strongest, and to beget a craving thirst for the fresh breezes and pure air of the country; while the necessity of making some permanent provision for the future for myself and growing family—a provision not dependent upon the capricious fluctuations either of trade or politics—pointed to the purchase of a snug little farm, in the vicinity of a good market, where all the advantages of a thorough agricultural education might be combined with those to be derived only from the inexhaustible resources of a large town. Governed by these motives and inducements, joined to an early imbibed and long cherished love for "rural sights and sounds," I availed myself of the facilities afforded by the emigration, a few years previous, of an esteemed relative and friend, himself a practical and experienced farmer, from one of the New-England states, to Fairfax county, in Virginia, to carry into effect the views and projects thus indulged, and in less than three days from my departure, found myself comfortably established at his hospitable mansion, seven miles from the city of Washington, within the confines of the "Old Dominion," and under what, compared with that I had so recently left, might fairly be termed a tropical sky. Within one month thereafter, I succeeded in purchasing, on very advantageous terms, a farm of seventy acres, eligibly situated, and which I am now engaged in improving.

Doubtless all of your readers are more or less familiar with the topography and associations of this part of Virginia—the theatre of our earliest annals as a people—the nursery of our greatest statesmen and patriots—the home and the final resting place of the Father of his Country. Here, on the verdant banks of the Potomac—wrapt, as is most fitting and emblematic of the fame of its great founder, in perennial shrubbery,—is Mount Vernon,—and here, at a little distance from the noble mansion, is the Tomb of Washington—the consecrated shrine watered by the tears of a grateful country, and resorted to by crowds of "succeeding pilgrims" from every part of the civilized globe. Here stands the venerable though dilapidated wooden walls, where, at the periodical sessions of the county courts, during those "times which tried men's souls," immediately preceding the outbreak with the mother country, the former heroes and statesmen of the republic—the Washingtons, the Lees, the Henrys, and the Randolphs, were wont to assemble and to discuss the portentous aspects of the political horizon; and here, after the storms of war had spent their fury—after a new republic had sprung into existence—and its high destinies had received the lasting impress of its founder's counsels and guidance, the soldier statesman retired to find in the shades of private life that repose and seclusion he had so nobly earned, and so long and ardently coveted. These are all and each matters of general notoriety; but it may not be known to all that for a few years past, this little county, so richly fraught with the proud associations of the brightest period of our country's history, has been the theatre of a very general and extensive emigration from the northern and eastern states; that the original proprietors of its broad acres and vast forests and noble streams, have, in numerous instances, either abandoned their patrimonial estates, and taken up their line of march for the boundless prairies and virgin fields of the west, or contracted their domains within practicable limits for agricultural improvement: and that the lands thus abandoned, exhausted as a large proportion of them have been by heavy and unintermitted croppings, without any corresponding return in the shape of fertilizing manures, have been purchased at a low price compared with their intrinsic value for farming purposes, by northern and eastern men, who have brought with them to their new abodes that indomitable industry and practical skill before which every obstacle to the attainment of an independent competence for themselves and their children speedily disappears, and the tangled wilderness of a luxuriant but neglected soil is rapidly made to "bud and blossom as the rose." Not less than two hundred of this enterprising class of our fellow citizens have within the past five years, issued from the great "northern hive" and quietly effected the most desirable settlements in this attractive and genial clime, and within the boundaries of this single county; and upwards of two hundred thousand dollars have already been invested in the purchase of improved and unimproved real estate within its limits—most of it at prices ranging from two to five and ten dollars an acre, according to its productiveness and the extent of its improvements. This land consists chiefly of estates, the greater part of which has at a period not very remote, been under vigorous cultivation, and subjected to a succession of exhausting crops, when instead of being placed under a judicious treatment, with a view to the restoration of its fertility, it has been exchanged for other portions, destined in their turn to share the same fate. Thus abandoned, a rank and luxuriant growth of pines, and other evergreens, and shrubs of various descriptions, has usurped the place of tillage. In the mean time, a similar process has been slowly but constantly going on with the adjacent lands, until their proprietors have found no other alternative than emigration or a return to their worn-out lands. The latter presents a formidable enterprise to the planter who who has hitherto only found it necessary to follow the established routine of putting in his crops at the accustomed season, to realize at the end of the agricultural year, an abundant, even though a regularly diminishing harvest, and who, when the results of this species of culture, carried on by the agency of slave labor, rendered it no longer practicable to rely upon one set of fields, had only to resort to others adjacent, and to continue the same process, regardless of ulterior consequences. The former, accordingly, is unhesitatingly adopted; and vast quantities of land are thrown into market at nominal prices, which, in the hands of northern farmers, accustomed to rely upon their own labor, and to make the most of every acre, by husbanding its resources, and by systematic and judicious modes of culture, in a few years resumes its original fertility, and amply compensates the expenditure, as well of capital as of labor, bestowed upon it. The vicinity of the Washington market—at all seasons one of the best and most constant to be found in the United States—and accessible by the best of roads—the mildness of the clime—the uniformity of the temperature—the early period at which the labor of the husbandman may commence, and the length of the season which is before him, and which is never contracted, as at the north, by unexpected frosts and early winters—the wonderful luxuriance which attends the growth of every species of vegetable, grain, and grass—the consequent frequency and abundance of crops—these advantages, together with the general healthfulness of the surrounding country—and the adaptation of the soil to most of the purposes required in an enlightened system of farm husbandry—present strong inducements to all in a less favored climate, whose circumstances or inclination point to a change of domicil, rather to avail themselves of the certain blessings attendant upon the advanced and settled state of civilization, such as is unquestionably to be found here, than to brave the perils and suffer the deprivations and *depravations* of an incipient state of social advancement in the far west.

To those whose physical constitutions have been undermined by the rude and incessant attacks of a harsh climate, and by the rapid alternation of heat and cold which is so common in the northern and eastern sections of the Union, and which it is so impossible effectually to guard against, there can be little doubt of the permanent advantages which a transfer to the mild, equable, and at the same time invigorating breezes of the "sunny south" secures; and which, I am confident, neither a continual northern "exposure" nor the much vaunted "sea breezes" of that latitude can so effectually command. My own experience, and that of others, similarly situated in this respect, can abundantly vouch the almost instantaneous efficacy of the remedy here pointed out, in the renovation of health and strength, the elasticity of spirits, and the complete invigoration of the entire physical system. To that large and constantly increasing class of our young men who are rushing into the already crowded avenues of the various professions, where, in a few short years at farthest, the greater portion of them must be hopelessly stranded in the vortex of that ruinous competition which must necessarily ensue from the vast disparity between the demand for their services and the supply—no less than to the struggling victims to this disastrous and injudicious choice—the cultivation of the soil opens a most inviting and profitable field of honorable enterprise—and I know of no more advantageous investments in this field than are presented by the inducements held out to emigrants and purchasers of land in the eastern or tide water sections of Virginia. This territory is, as yet, sparsely settled; its divisions, instead of being meted out by villages and towns, are subdivided only into counties—the occupants of its soil are widely separated from each other: and such is the tendency to segregation, that you may, in some instances, travel the most frequented highways for twenty, thirty, and forty miles, without becoming aware, except occasionally, of the proximity of a single dwelling—the mansions of the proprietors being thrown back for nearly a mile, and approached by circuitous and wooded lanes. This state of things grows out of the great extent of their domains, and the consequent advantage of a central location with reference to its various parts. From five hundred to a thousand and two thousand acres, are regarded as but an ordinary farm. The period has now arrived, when, for the reasons to which I have above adverted, large portions of these lands are thrown upon the market; and from the sales which I have seen ef- during my short residence here, and the vast quantities of fertile and productive land every day offered at prices which are much below the prevailing standard at the north for lands of the same quality, I am well satisfied that capitalists and laborers, with but limited means, might, to say the least, "go farther and fare worse."

I have only to add, that so far as my personal observation and means of information extend, the *society* in this, as well as in every portion of this ancient commonwealth, is of the highest order. Churches, schools, and all the varied institutions which indicate an advanced civilization, abound in every quarter. Slavery, it is true, "and pity 'tis 'tis true," exists; but I have as yet, been able to discover none of those more flagrant enormities with which the fertile imagination of some of our northern friends has invested its already sufficiently repulsive features. The slaves, in this vicinity, are, without a solitary exception, well treated and carefully provided for. The entire gallery of the church is set aside for their use on Sundays; and they uniformly attend, and, I doubt not, profit by the lessons they receive. But I have already trespassed too far upon your valuable paper; and will defer what I have to say further to another number. S. S. R.

Lake Borgne Place, Prospect Hill, Va.

RUTLAND COUNTY, VT.

Messrs. Editors.—I perceive from the December number of the Cultivator, that 138 copies of it are taken in Rutland, and the number taken by the other towns in the county, show that we are eager for information and improvement in agriculture, rearing stock, &c. The soil of Rutland county, (the valley of Otter creek in particular, which runs nearly through the middle of the county,) is not surpassed by any in New-York or New England. The eastern part of the county, lying on the Green Mountains, is excellent for grass, potatoes, and English grain. The dairy, and raising cattle for market, is the principal business. The western part, bordering on Lake Champlain, has a stiff clay soil, that bears grass and hay of superior sweetness, on which large herds of cattle and sheep are fattened for Brighton market, and sold at no. 1 prices. The valley of Otter creek is good for all the grains and grasses, and remarkable for the evenness of crops in all seasons, never suffering, like most other places, by drouth.

The greatest product of the county is Merino wool. There are many fine flocks that average 3½ to 4 lbs., and some of a little coarser staple, that shear 5 to 5½ lbs. well washed wool; stock bucks from 8 to 14 lbs. Rutland alone keeps 26,000 sheep.

The Rutland Co. Ag. Society was formed about a year ago. Its prespects are most encouraging. The October fair told well for the first one, for horses, cattle, and sheep, agricultural implements, and manufactures. From 7 to 10,000 of the yeomanry were present. The annual meeting of the society was held on the 6th inst.; an excellent address was given on the occasion, by Prof. Hallock, Principal of Castleton High School (Agricultural lectures are given at this institution, and some practical instructions.) The address is to be published; also one on a former occasion, by Prof. Carr, and an essay on manures, by Dr. Ives. The premiums on field crops were awarded as follows:—Spring wheat from 22 to 29 bushels to the acre; corn, 5 applications, from 99 to 135 bushels; oats, from 57 to 84 bushels; potatoes at the rate of 675; carrots at the rate of 1,430 bushels; white beans, 37 bushels. Potatoes in this county but little affected by the rot this year.

H. W. Lester

Rutland, Vt., 1847.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

LETTERS FROM HOLLAND—No. II.

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Utrecht, Dec. 8, 1846.

Editors Cultivator—In the sketch of my journey from Antwerp to Utrecht, commenced in my last letter, I had got somewhat beyond Breda. The country through which we now passed was lower than any we had yet seen, the fields being in many places below the level of the canals, so that the water was pumped up by windmills, and discharged into the nearest canal; upon this method of draining I will not enlarge here, as I may probably devote one or two entire letters to it when I have seen more of the practical working of the system.

The Dutch, in this part of their country at least, have improved their advantages for the keeping of water fowl. Ducks seemed to be the favorites; every little cottage had a troop of them in its neighborhood. During the greater part of the year they support themselves entirely. Oblong baskets, made of straw and reeds, leaving a hole in one end, are provided for their habitations. These are placed on four sticks so as to be elevated a foot or two above the surface of the water, and are reached by means of inclined planes, up which the ducks can waddle quite comfortably. There are generally two or three of these nests at different heights, so that the inhabitants can retreat from one to the other as the water rises in winter.

We now crossed, at intervals of some miles, three branches into which the Rhine is separated in this part of its course. These are called severally the Old Rhine, the Lele, and the Wal. One of them is crossed by means of a bridge of boats, and the other two by ferries of a very primitive character. Much of the country included between these streams is admirably adapted for cultivation; the soil is light in appearance but deep and mellow, evidently possessing great capabilities. A great portion of it lies so high that by means of tiles and careful levelling, it would be quite possible to thorough drain it. This appears scarcely to have been commenced yet; but it would without doubt be of immense advantage. Many large open ditches would still be necessary in order to carry away the water in winter, and into these short tile drains might discharge. I should think the soil of this district admirably adapted to the turnep culture; indeed, we saw some remarkably good crops.

After crossing the last branch of the Rhine, we found the country between it and Utrecht, very low and wet. The river is considerably higher than this region, and vessels descend into the canal that leads to Utrecht, by means of several locks. By means of open drains at short intervals, the water stands a few inches below the surface of the soil, but little of which, in this section, seemed to have been plowed; the greater part by far being in pasture. Some of these pastures are very rich, covered with a fine, thick, dark green herbage, resembling in appearance some of the celebrated old pasture lands of England. In fact, they are doubtless much the same; as for the most part, they have not been plowed within a half century, if ever. If the water has always stood at its present level, three to six inches below the surface, plowing has always been out of the question. By the use of a few wind mills, all of these fields could be much more thoroughly drained, and the farmers enabled to grow grain crops over a large extent of a soil now almost untouched. The Dutch farmers think, I suppose, that these fields are more valuable in their present condition, as unfailing and rich pastures

Prof. Johnston, in his lectures, has some interesting remarks upon the causes of the gradual improvement of pastures upon some of the stiffest clay soils of England; the same causes which he specifies there, probably have a certain influence here.

We saw very great numbers of cows and bullocks during the day, but few sheep. The cows are almost invariably spotted with black and white, and of large size. Towards Utrecht we observed a few of a red color, but still spotted with white. Almost all of these cows had on a kind of jacket, or perhaps it might better be compared to a horse blanket. It is made of coarse brown cloth which looks like sacking, and covers the whole back and shoulders. The owner's name, or some distinctive mark is frequently painted upon it. These coverings are of course intended to protect the animal as much as possible from the effects of the weather; but it does not seem as if they would be of much use in so mild a climate as this. It is possible that the fogs and damp nights may be found injurious; but animals in the lowlands of Scotland, exposed to exactly such weather, need no such covering; this may, however, be owing to difference of breed. In the Highlands of Scotland, on the more bleak exposed farms, it has been found necessary to put jackets on the sheep, in order that they may endure the cold storms; but I do not know that even there, the black Highland cattle ever receive any such protection.

The broad extent of pasture land, and the great numbers of cows about Utrecht, show this to be mostly a dairy country. I am within a few hours of the most celebrated cheese and butter districts. The quantity of both these articles annually exported is immense. It is said to be somewhat difficult to obtain access to the best Dutch butter dairies in such a way as to thoroughly understand their method of making; but I think that it may be managed when I have acquired the language. It certainly will be worth a trial. I cannot hope to accomplish much in this way before spring.

I hear little of the potato disease here, and those brought upon the table are as good as I have ever seen. They grow a small kind here expressly for the table, which are not great bearers, but remarkably mealy and fine flavored. In consequence of the extensive failures last year, a much less breadth of ground has this year been planted with potatoes than is usual, and the deficiency has been supplied by growing increased quantities of buckwheat, turneps, cabbages, and the endless variety of other vegetables for which the Dutch are so famous. Yours, truly, John P. Norton.

NOTES of a TRAVELER in ENGLAND—No. III

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Markets.—Markets are established and held at stated periods, in every part of Great Britain and Ireland. Some of these are for fat cattle alone; others for store animals, milch cows, sheep, horses, swine, &c. Purchasers are thus enabled to select the stock they may desire; the farmer finds a ready market for what he has to dispose of, and can always receive the pay down for his stock, it being the custom so far as I could learn, always to pay cash at these fairs. Grain markets are also held, and the same rule prevails. The sales are usually by samples, the buyer and seller each retaining a portion of the sample, to prevent any question as to the quality of the grain sold. No writings are used, the purchaser and seller merely striking hands, as evidence of the bargain. I was told that a case very rarely occurs where the bargain is *repudiated*. The sales are commonly effected by salesmen, who are men of responsibility, and at all times familiar with the state of the market. Many advantages, it appears to me, result from their method of doing business. The prices are uniform; the farmer obtains the market price; and is not subject to the wiles of the sharper or forestaller. The certainty, too, that he is sure of finding a sale for his stock or grain on market day, and that for cash, is an object of no small account. Whether this system, or something analogous to it, might not be introduced to advantage in America, is certainly worthy of consideration.

SMITHFIELD MARKET.—The Smithfield Cattle Market, in London, held every Monday and Friday, is the largest, and doubtless the most splendid exhibition of cattle and sheep in the world. I visited this market on market days for several weeks in succession, and the beauty, extraordinary fatness, and perfection of the animals exhibited there, was certainly far superior to what I had anticipated.

Monday is the principal market day, Friday being for the cattle and sheep unsold on Monday, and such as arrive after the Monday market. The number of fat cattle weekly brought up, ranges from 2,500 to 5,000; and sheep, 20 to 45,000; calves, 200 to 300; swine, from 200 to 500. This market is in the very heart of London, and as there exists a *prescriptive* right to it, it cannot be removed. It is becoming too strait for the increasing wants of this vast metropolis, which has a population nearly equal to that of the state of New-York, and preparations were making when I was there, to enlarge its dimensions, by removing a large number of buildings. The animals are usually all in their places by sunrise, and are required to be removed by three o'clock in the afternoon, when the whole ground is carefully cleaned, leaving very little traces of its use. The cattle brought up here are from two to three and four years old, acquiring maturity much earlier than is common with us. Since the completion of railways, the cattle come up in much better condition than formerly. Some complaint, however, now exists, as the cattle are frequently injured in the cars by being bruised. The advocates of the broad guage railways, say that this difficulty only exists upon the narrow guage roads, with how much truth I am not prepared to say.

Mr. Colman, in one of his numbers, having given a description of *Smithfield* by night, I took an early opportunity to witness it myself, and I can with truth say, "the half was not told me." I take the liberty of giving his description, which presents as vivid an impression of the scenes which transpire, as anything upon paper can give:—

"SMITHFIELD BY NIGHT.—About midnight, the different detachments, almost treading on the heels of each other, begin to make their way to the place of rendezvous, through the winding streets of this wilderness of houses, and enter the great market place by different and opposite avenues, and like hostile parties, often meet each other in the very centre. Then comes the conflict; the driving of so many thousands of sheep into the several pens; the assorting and tieing up or arranging so many thousand cattle, driven into a state of terror and phrenzy by the men and dogs; the struggles of the different owners or drovers to keep their own and prevent their intermingling with others; the occasional leaping the barriers, and the escape of some straggler who is to be brought back by violence; the sounds of the heavy blows over the head and horns, and sides of the poor crazed animals; the shrieks of the men; the yelling and barking of hundreds of dogs, who look after the sheep and cattle with a ferocity perfectly terrific, and a sagacity almost human; the bellowing of the cattle and the bleating of the calves; forming, if the expression is allowable, a concert of discordant sounds utterly indescribable and hideous, and in the midst of all this confusion, the darting about of hundreds of torch-torches, carried in the hands by men looking for their cattle and sheep, and seeking to identify their marks—all together present an exhibition for which it certainly seems difficult to find a parallel, and sufficiently gratifying to the lovers of the picturesque in human affairs."

The cattle most valued in the Smithfield market, are the Scots, as they are called, consisting of Polled Galloway, West Highland cattle, &c., from Scotland. These are mostly black, of medium size, extremely fat, their meat richly mottled or variegated, and are sure to command the top of the market. These cattle are often fattened by the farmers in England, and the ease and facility with which they take on flesh when placed in their rich pastures, render them a very profitable breed for the market. It struck me, that these are the very animals we need in America, in some sections, at least, and from what I learned of their hardiness, aptitude to fatten a' an early age, and the superiority of their meat, I have no doubt they would be one of the most profitable breeds of cattle that could be introduced. A breed similar to the West Highland, I saw in Anglesea, in Wales, and they succeed well there, and are more numerous than any other breed.

The Herefords, Short-Horns, and Devons, are next to the Scots. I esteem the Herefords as very choice animals for beef. Some of as fine animals as I saw in the markets were of this breed. The Short-Horns are much more numerous than any other breed. I should judge that they were nearly equal in numbers to all the other classes. They are the leading stock in England, and their popularity seems to be as high as ever. Several sales from choice herds took place while I was in England, at which the prices ranged very high. At one of them, Earl Spencer's, I think, some of the bulls brought $1,500, and cows sold from $300 to $600.

In passing through the country, cattle in preparation for the market are to be seen on almost every farm. They are fattened on turneps, carrots, oil-cake, &c., and no pains or expense is spared to render them of the finest quality. The great perfection to which animals bred for beef attain is remarkable. Their aptness to fatten, and the laying on of the flesh on the most valuable parts has been secured, so as to leave little more to be done to make a perfect animal for that purpose.

The manner of conducting business market days is different from anything we have in America. Salesmen have the charge of all the cattle and sheep brought to market. They are licensed, and are allowed a certain price on sale—which is about one dollar a head for cattle, and sixteen cents for sheep. The cattle are sold, estimating their weight by the eye, which is done with remarkable accuracy, and the salesman settles with the owner, taking all risks as to pay from the purchaser, on himself. The cattle sell, generally, at from $75 to $100—their weight averages from 600 to 800 lbs., the four quarters dressed.

I observed the purchasers of fat cattle, as soon as a bargain was closed, take their shears and clip off the brush of the tail, and place the same in their pockets. The cattle are then marked, and when slaughtered every part of the animal, horns, hoofs, tail, &c., is preserved with as much care as the brush of the tail. Ox-tail soup is made from the tail. 'Tis said the French introduced this dish, and if all their preparations are equal to this, there is little danger of an Englishman's suffering, even if he should be obliged for a time to live on French cookery.

Milch cows are brought up to the Smithfield market, and are to be seen there every week, though not in large numbers—as the principal market for cows is at Islington, near the great milk establishments of

Messrs. Rhode, and Laycocks. Most of the cows which I saw were Durhams or their crosses, and better cows for milk, in appearance, I never saw. They are preferred in the London Dairies, and are found to yield more milk than any others—and the ease with which they can be fattened when they fail to give the necessary quantity of milk, renders them very desirable for the dairy establishments.

Shepherd's Dogs.—The sagacity of the shepherd's dogs, which are used in driving cattle and sheep, is truly remarkable. The sheep are driven in small numbers, from 15 to 20 or 30 together. Several flocks arrive at the same time, and frequently they become mingled together; yet the dog will find out the sheep of his master, and seldom fails of bringing the wanderer back to the flock. Frequently I have seen a dog directed to bring forward a sheep from the back side of the herd to be examined by a purchaser. He immediately jumps into the pen, and with a bite upon the heel of the sheep starts the animal forward, and he is placed ready for examination. Many similar feats are exhibited, showing that they possess in a remarkable degree intelligence, and if they could speak, it seems that often they would evince more than their masters themselves. P.

PRINCIPLES OF PLOWING.

The principal objects of plowing are, 1st, to loosen the soil for the purpose of forming a proper bed for plants; 2d, incorporating manures with the soil; 3d, destroying the sod or sward, and so placing or arranging the soil and its ingredients that the matters which contribute to the growth of plants may be converted to a soluble state, and rendered available to their support when needed.

The advantages of a mellow bed for plants, are that they more readily extend their roots, and are thus enabled to appropriate to their use the vegetable food contained in the soil, and at the same time obtain a firm hold by which they are better secured against injury by wind or other accidents.

The advantages of incorporating manures with the soil, are in some degree obvious, though these advantages are somewhat various under different circumstances. It is evident that the most favorable action of manure upon soil cannot be attained without some degree of mixture. That the action of the saline principles of the manure tends to render soluble those mineral ingredients of the soil which are known to form constituent parts of plants, there is no doubt; and to effect this result the soil and manure must be brought in contact. On tenacious or compact soils, it is desirable to produce a mechanical effect by the use of manures; that is, to render the soil more open and friable, and hence, in such cases, a thorough mixture of manure, or materials of a fibrous nature, such as straw or long stable dung, becomes necessary.

To facilitate the decomposition of the sward and other vegetable matters, and bring the food of plants into a soluble state, the soil and its ingredients must be placed in such a condition as to be easily acted on by the elements which promote decomposition. Oxygen, one of the component parts of the atmosphere, is the great decomposing agent of nature, and by the aid of heat and moisture, it effects the dissolution of animal and vegetable bodies, as well as many mineral substances.

In performing the operation of plowing, these principles should be borne in mind, as they may furnish a valuable guide in regulating the depth and width of the furrow-slice, and the situation in which it should be left by the plow. It may be observed however, that the proper width of the furrow-slice, must depend somewhat on the nature of the soil. The object is to effect a proper degree of pulverization, with a due exposure to the action of the air.

Loose, gravelly soils require, of course, less artificial division than those of a compact texture; and a width of furrow may therefore be allowed in the former case, which should by no means be taken in the latter. It is one of the greatest defects of our system of plowing, generally, that the furrows are too wide. This error proceeds, probably, from the habit which prevails, of going over a great deal of land in proportion to the labor employed. On all soils which tend to pack and become too close, this system is very injurious. The wider the furrow-slice, the heavier it will be, and the closer it will lie; and it is thus impossible to secure a proper state of friableness unless the soil is finely divided by the plow. Mr. Colman informs us that on the best farms in England the width of the furrow-slice is from eight to ten inches; and in our county the most successful farmers never permit a greater width. We are glad to see that the practice of making narrow furrows is becoming every year more common with us; and we have no doubt that in the course of a few years, its advantages will be generally acknowledged.

Much discussion has been had in reference to the manner in which the furrow-slice should be left—whether flat or at an angle. The same principles are involved in this question as in that relating to the width of the furrow-slice. The flat furrow leaves the soil less light, and in a situation to be penetrated with more difficulty by those decomposing agents, air and heat. The objections to this position of the furrow, are, however, something in proportion to the heaviness of the soil; and on very loose soils it would not be liable to any objection. The proper depth of plowing, must depend much on the composition and nature of the soil and attendant circumstances. Though we advocate deep plowing in general, it seems to us that the system is not universally applicable. We cannot, for instance, discover its advantages on cold, thin soils, where the under stratum is deficient in the elements of vegetable food. There would here however, be an advantage in loosening the subsoil; though we should prefer doing it by the subsoil plow, rather than to bury the vegetable matters of the soil, and bring to the surface the cold and sterile subsoil.

But some lands, unlike those just mentioned, contain the elements of vegetable nutrition to a great depth. Such is the case with alluvial soils, and all those which contain organic matter in the subsoil. In such instances, an advantage is derived from deep plowing, which cannot be wholly effected by subsoil plowing. By bringing the lower soil to the surface, the action of heat and air reduces the vegetable food which it contains, to a soluble condition. We have several times witnessed the good effects of this operation. In one instance we have known a farm which had been so worn down and exhausted that the average yield of wheat was only ten bushels per acre, completely renovated and brought to produce from twenty to twenty-five bushels per acre, chiefly by thorough plowing to the depth of two to three inches below where the ground had been stirred before. The subsoil was rich, but in its natural position was altogether inert, and afforded little or no food to crops. When it was brought within the influence of the sun and atmosphere, a decomposition took place which rendered it equivalent to a dressing of manure.

We should therefore be in favor of loosening the subsoil, *in all cases,* to as great a depth as it can conveniently be done; but, except in cases where the subsoil contains the essential elements of fertility, we should prefer doing this by the subsoil plow, instead of turning down the top soil and supplying its place by that from below. It is only in that portion of the earth, (as we before remarked,) which is brought within the direct influence of the sun and atmosphere, that the food of plants is brought into the state in which it is consumed by them. On heavy clays, for instance, manure may be so deeply buried by the plow, that it will afford but little support to crops.

It is proper to remark that somewhat different effects are sought to be produced in plowing sod, or sward, and "old land," as it is sometimes called. In the former case, it is desired to place the grass and vegetable matters in such a position that their growth shall be stopped, and that while they shall not interfere with the crop which is to be put on the land, they shall be made to contribute to its support by their decomposition. The sward must be so far inverted as to destroy the grass, and the furrow-slice must be left light to favor decomposition and allow the plants which it is wished to cultivate, to extend their roots. The necessity of carefully inverting the sward, prevents, in some degree, the perfect pulverization and intimate mixture of the soil, which would otherwise be the leading object.

Plows of different construction are best adapted to these purposes. For sward, the implement should be of more length, with a more gradual curve of mold-board, in order to lay the furrow over without its being broken. For "old land," a mold-board with a shorter curve would be preferred, that the soil as it rises may be thoroughly broken and crumbled to pieces.

We have before alluded to subsoil plowing. Its advantages may be briefly stated to be that it affords a greater depth of loose earth for the roots of plants; opens the soil more to the exhalation of moisture from below, which affords protection against drouth; admits the rains to wash out injurious mineral substances which in some instances are contained in the soil and subsoil; and in many cases it operates as a means of drainage.

We have no doubt that some of the advantages here enumerated, would follow the use of the subsoil plow on nearly all soils, though the greatest benefit is thought to be derived from its use on soils underlaid by "hard-pan," and on those having a tenacious subsoil. The "hard-pan" is often occasioned by the oxide of iron. An impervious stratum is frequently formed just below where the soil has been moved by a common plow, on lands which have been long cultivated; and experience has shown that if this crust is properly broken, the particles of iron which had formed it may be washed out and the fertility of the soil greatly promoted.

The use of the subsoil plow on clayey soils, lessens their tenacity, and allows the surplus water more freely to descend. It has been objected to the practice of subsoiling in such cases, that the earth would after a while become as compact as ever. We cannot see the force of this objection. We know that all heavy soils become in time as close and impervious after having been plowed, as they were before they had been subjected to this operation; but no reasonable person would deny that they were rendered more suitable for the support of crops by being plowed; and we should no more think of objecting to the use of the subsoil plow because its benefits would not continue forever, than of objecting to the common mode of plowing for the same reason. We admit with Mr. Colman, that the advantages of subsoil plowing are the greatest in connexion with thorough draining; but at the same time we think it evident that an advantage, of greater or less extent, according to circumstances, is always derived from loosening the subsoil. It is true the earth may run together again. So does the surface soil; but loosening and opening it must only be repeated again, and with the more frequency as the condition of the soil renders it necessary.

In plowing for spring crops, we should prefer commencing on the "old land," leaving the sward till vegetation has started, and the season has so far advanced that the soil has become somewhat warmed. The sward rots much quicker under such circumstances, and the growing crop appears to derive a greater benefit from it.

CULTIVATION OF HOPS.

In answer to various inquiries which we have received in regard to the culture of hops, we here give an abstract of the remarks of Mr. Colman on this subject, in Part viii. of his "European Agriculture."

He observes that he has had the opportunity of seeing the hop cultivation of Kent and Surrey, where it is carried on in the greatest perfection. The principal points to be observed in the preparation of the ground, planting, &c., are given as follows:

"The ground for hops should be a rich and mellow soil, and, in general, the farmers are of opinion that in order to produce the best quality of hops, the substratum of the soil should be calcareous. That the plant requires a deep culture, is evident from the roots having been traced to a distance of twenty feet. The land requires to be trench-plowed or spaded to the depth of two spits. The former mode is the least expensive at first; the latter mode will prove the most eligible in the end. The ground, indeed, should be subjected to the it garden cultivation.

'The hills are to be marked out in right lines, at a nce of six or eight feet apart. The spot which is to receive the plants should be rendered as mellow and rich as may be, by careful digging. Three or four plants may be placed in a hill. These may be procured from the clippings of the vines, in March; or from what gardeners call layers; or from seed. The latter mode is considered preferable. In hops, the male and female plant are distinct; but many cultivators reject and extirpate the former as barren. It is necessary that they should grow together—that is, a due proportion of the male plants should be cultivated in order to give that energy and vitality to the seed without which it would not produce its kind. This it is which gives weight to the hop, which gives the fine aromatic bitter to the production of the vine, and more fully to the seed; the petal, or leaf of the flower, containing but little of the astringent quality of the hop. 'Cultivators of the hop are urged, therefore, to have many male plants on the ground, at least one to fifty female plants, and particularly to encourage them around their plantation, in the hedges, where no ground will be lost.'"

Hop plants raised from seed are said to surpass those raised from cuttings, are more luxuriant in their growth, and much less liable to be injured by blight. "They are found to have a seed at the bottom of every petal of the flower, of a most pungent aromatic flavor; while those plants grown in the usual way without the necessary quantity of male plants, have scarcely any seed, and they are mostly abortive. In fact seed gives weight and flavor to the hop, and constitutes the vitality of the plant, or the condition or strength of the hop; and where there is the most seed, there will be the most condition."

"The vines, or bines, grown from seed, will be fit to be poled the third year; those from cuttings or layers the second year. The business of the first year is to keep the ground as clean as possible, and the plants well earthed up. Though they are not poled the first year, yet a stick is put into the ground, to which they are tied and trained. The hop is an enduring plant, and some fields in Kent have been in hops beyond the memory of persons now living; but it is deemed best to renew them once in twelve or fifteen years.

"The hills require every spring to be opened and carefully trimmed—the last year's shoots to within an inch of the main stem, and the suckers close to it. In some cases they are manured only once in two years. Farm-yard dung is an excellent manure for them, and the clippings or waste of woolen mills, called *shoddy*, are much valued and used. The land on the borders of the chalk formation is much preferred for the growth of hops."

Of varieties, those called "the *grape*, the *white bines*, and the *golden*," are most esteemed. "The white bines are most esteemed in Farnham, Surrey, and there are no hops in the market which bring a better price than the Farnham."

The poles used for hops are from twelve to sixteen feet long. Chestnut, ash, and larch, are the kinds of timber from which they are made in England. In this country cedar would probably be preferred, from its lightness and durability. As a protection against injury from winds, rows of trees are sometimes planted on the sides of the fields most exposed. The experiment has been tried of strengthening the poles by means of an iron wire extending from one to another on the top. Another mode which has been adopted for the same purpose, is described as follows: "The weather sides of the piece had been poled four hills deep, with handsome, straight, twenty-one feet, large poles, in rows. These were lashed to similar poles placed horizontally across them, about eight feet high, from end to end of the hills; and the rows of hills were similarly bound to each other by poles placed from the outside rows to the inside ones. By this means a phalanx of poles offers a sufficient resistance to the wind to shelter the whole ground." It is added that this arrangement has been found a complete protection against winds and storms.

Plantations of hops are sometimes cultivated by a horse-hoe or plow, and great pains are always taken to keep the ground clean from weeds. From accidents to which the crop is liable, such as blight and injury from aphides, a good crop is not counted on oftener than once in four or five years. "An acre contains a thousand hills, and the yield may be put down at from five hundred to a thousand pounds per acre." The expense of cultivating an acre of hops is put down at thirty pounds, exclusive of rent, or one hundred and fifty dollars.

"It is desirable that only the same kind of hops should be planted in a field, so that the ripening may be uniform. It is important that the hops should be of a bright golden color, and full of aroma, or what is called *lupulin*, which gives its value to the hop. The bines at the season of harvest are cut about three feet from the ground; lower than this is injurious to the plant from excessive bleeding; and the poles are then lifted from the ground and laid upon frames, when the picking begins.

"The hops are picked in large baskets, which are guaged by marks; and an accountant is always in the field to oversee the picking. They are sorted as they are picked, and the discolored ones put by themselves. The price for picking varies from two to three and a half pence per bushel, or from four to seven cents. From five to seven bushels is considered a fair day's work, though I saw one woman who had picked in a day eighteen bushels.

"The hops being picked, they are at once conveyed to the kilns, to be dried without delay. A night's delay would be extremely injurious. The most approved kilns are now made of brick, of a conical or sugar-loaf form." Mr. C. copies from "Buckland's Report of Kent," a description of these kilns. They are formed by "a circular kiln of brick-work, from fifteen to eighteen feet diameter, with rafters, twenty-four to twenty-seven feet long, leaving a round opening in the apex of the roof, surmounted by a movable cowl (or swinging ventilator,) the object of which is to allow the vapor of the drying hops freely to escape. The drying-floor should be at least ten or twelve feet from the fires; is usually made of stout laths of fir, about two inches apart, covered with a horse hair cloth, upon which the hops are evenly spread. The improved modern practice consists in having one or more large openings or fires to one kiln, and to admit plenty of cool air from without, the draught being regulated by means of flues and sliding doors. The fuel used in drying hops is, in all cases, charcoal or coke, with some anthracite."

In drying hops, we are told a large amount of sulphur is used; and though great prejudice existed at first against it, no objection is now made by the brewers. "The hops remain a few days after being taken from the kiln, in the storehouses, before being packed The packing has been repeatedly attempted by machinery, but none found equal to the human machine. A bag therefore is suspended through the floor of the room in which the hops are deposited, by a hoop, which forms a temporary rim to it; two large handfuls are tied up in the corners of the bottom of the bag, to render the handling of the bag more convenient; and the packer then gets into the bag, and draws the hops, which are shoved towards him on the floor by a child, with his arms, into the bag, and treads them with his feet as closely as possible. * * * A bag contains about 2¼ cwt."

We have chosen to give the English mode of cultivating and curing hops, because from the extent to which the business is there carried on, and the particular attention devoted to it, the management is better understood, and a superior article is there produced to that which is generally found in this country. Mr. COLMAN observes that great complaint is made of American hops in the English market; that they are not well cured and assorted. No insuperable obstacle, however, exists to producing hops here of a quality equal to the English; the same skill and attention which is there exercised is only requisite, and we cannot doubt that its practice would be attended with greatly increased profits. Mr. C. is quite familiar with the modes of managing hops in this country, and his account of the English method is on this account entitled to the more confidence, as he is able to judge correctly of the relative advantages of the different modes.

SUBSOIL PLOWING.—The editor of the Farmers Visitor says that by using the subsoil plow, his crops of potatoes were increased at least one-third—the same kind and quantity of manure being used in both cases. This difference on an entire farm, would in twenty years, amount to a large estate.

HESSIAN FLY IN OHIO.—The Ohio Cultivator states that much injury has been already done to the young wheat crops in nearly all parts of the state, by the fl

VETCHES OR TARES.

Ralph R. Phelps, Esq., of Manchester, Ct., requests information in regard to the culture of vetches or tares. There are, it is said, no less than ten species of vetch indigenous to Britain, and one of these, the tufted vetch, is believed to be indigenous to the United States. Several kinds are cultivated in England, the principal of which, according to C. W. Johnson, are the tufted vetch, wood vetch, common vetch, and bush vetch. Some of the species are perennial, and others only annual. The "winter vetch," (*Vicia sativa*,) is most approved in England, but we believe it has not succeeded in this country—or at least in the northern portions of it—not surviving our severe winters. The spring or summer vetch has been tried here and found to succeed very well for the production of forage, but does not seed as well as in England. It is, however much prized as a substitute for hay, and for this purpose, and as a preparatory crop for wheat, has been sometimes cultivated in this country.

In the "Transactions" of the *old* Agricultural Society of this state, we find an interesting paper on the cultivation of the vetch, by Robert R. Livingston. He gives the result of trials made with this plant in 1794, and '95. His first experiment was with spring vetches, of which he sowed one acre of rye-stubble—"the soil sandy and much worn out." He sowed the crop about the first of May, with three bushels of seed to the acre. When the vetches were up, they were dressed with a bushel of gypsum. They were cut when in full blossom, and "yielded two large wagon loads of hay." The fodder is said to have been "remarkably succulent, and extremely well calculated for cows and sheep." His next experiment was equally favorable as regards the value of tares as a forage crop, but they failed in seeding.

From the result of his trials, Mr. Livingston concludes that vetches would be the best of all preparations for wheat. "The ground," he says, "is so well covered that every weed is stifled: the air at the foot is stagnant, and the plant being of that succulent kind which feeds much on the atmosphere, I think it cannot fail to enrich the soil. Mine appeared so mellow and free from weeds when the vetches came off, that I was tempted to sow the piece to lucerne." It can be taken from the ground in time for the sowing of winter wheat

In addition to the above, we give the following communication. The writer is practically acquainted with the culture and uses of vetches, both in England and in this country.

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Messrs. Editors—Vetches are grown in England to a very great extent, with much profit to the farmer, and with great benefit to the soil. They will grow on any kind of land without manures, if it is not very much exhausted, and are excellent food for all kinds of animals. I consider them the very best food for fatting sheep, as those animals will thrive faster on them than on any other kind of green food. The farm horses are principally kept upon them, more especially on light soils. In some instances, when their day's work is done, they are all tied by the leg with a long chain, and thus eat them off the field where they grew; but the more regular practice is to draw them home to the stables, or a large yard, surrounded with sheds with side mangers, to feed them in. This yard is kept well littered to absorb all the moisture made by them. Cows are very fond of them, and in dry seasons when pastures are short, they are often fed to them morning and evening while milking. And I may here remark that I believe it to be an excellent practice to feed cows while they are being milked, as they let down their milk more freely. But it is dangerous to feed the green vetches to excess; they will cause bloat, and very much injure a cow that is pregnant. I have known many cows to slink their calves from being overfed with vetches.

Store hogs are kept in thriving condition with them through the summer. This crop, when fed off on the land, is next to the turnep, the most renovating one to the soil, more especially on light soils, where a seven field system is pursued; and that being my practice, while with my father in England, I will state it, to show the advantage of the vetch crop.

I winter-fallowed for turneps, in the way I described in the Jan. number of the Cultivator, and was generally successful in obtaining a good crop. The turneps were fed off by the sheep in the winter, the ground plowed once, sowed with barley, and laid down with clover, rye grass, and trefoil. This was a very stony soil. The next year mown for hay; the following one pastured until August, plowed once, and sowed wheat. As soon as the wheat was off, part of the field was plowed once, and sowed to winter vetches. Early in the spring another portion was sown to spring vetches. The sowings were continued until the whole field was sown. The object in the different sowings was to have one come in after the other, so that they may be fed off by the sheep before and when they are in blossom. The fall sowing will be ready to feed the sheep in June, and will force them for market much sooner than any other kind of summer food. In this way nearly all the ram-breeders force their sheep to the extent they have done. Some of them mow them and feed in racks, giving a fresh piece of ground from which the vetches are mown every day, and on which the sheep are certain to lie and leave their manure regularly over the field. Others give them a fresh piece daily; about as much as they will eat up clean, and the sheep eat them from the land as they grew; but I think they do enough better when kept clean for them in the racks, to pay the extra labor.

These small divisions are made by hurdles used for that purpose. When the vetches are fed off, the land is in a good state for oats, and plowed once in the spring for them, coming in for turneps again the following year. By this mode of culture, and a strict attention to clean seed, the land is kept free from refuse, and two white crops in succession are avoided, which I consider of much importance.

I have grown a small quantity of vetches in this country. The spring vetch has done as well as in England, but the winter one will not stand the severe winters in this northern climate. I have seen several small fields of the spring vetch grown by others, with very good success. The seed of the winter one is much smaller than the spring; the latter will not stand the winters in England. I have a more favorable impression of Indian corn for soiling, but whether it will answer for feeding sheep in the way I have described, is doubtful. My opinion, however, would be favorable. I think if sheep were put on it while the plant is young, they would eat the whole of it, and when it failed, it could be sown a second time. Wm. H. Sotham.

Mr. Colman, in his last no., says—"This plant is extensively cultivated in England, and considerably in Scotland; and in my opinion its cultivation may be strongly recommended in the United States."

THE ORCHARD AND THE GARDEN.

TRANSPLANTING FRUIT TREES.

Eds. Cultivator—When trees are taken from the nursery, where the ground is made rich, and placed in poor soils, they thrive like a horse that has been well fed with oats, and then is given nothing but straw to eat. The ground should be made richer than where they had formerly stood. I have had some experience in the planting of trees for 20 years, and have tried various ways to make them thrive on light and dry soils. Hog manure is the best I ever tried, particularly for the pear, being very rich, and of a moist nature, taken fresh from the pen, and mixed thoroughly with the soil as far as the roots extend. In using this manure, a Beurre Diel pear, budded on a stock to the ground, no larger than a pipe stem, grew eight feet the past season. This manure is generally thrown out of the pens and never removed, when one load is worth ten of cattle or horse manure. The planter should know what kind of trees his soil suits. The Swaar apple, and Baldwin, Yellow Bellflower, Roxbury Russet, and others, might be mentioned, that require a light and dry soil. They will then be large and very fine; whereas, if placed on a wet soil, they are small, and destitute of flavor; and the nurseryman is generally blamed, and called a scoundrel for selling such trees. On the other hand, the Ribston Pippin, and many others might be mentioned that require a moist soil. The pear requires richer ground than the apple, and should never remain in grass. A top dressing should be plowed or spaded in every year, for trees must have food.

THE PIE APPLE.

This was raised from seed by Mr. Moore, in one of the eastern states. About 30 years ago, Mr. Moore's son came to this place, and brought grafts. The tree then grafted stands on the farm of Mr. Hadden, (my neighbor.) The tree is a vigorous grower, and bears large crops every year. It commences ripening in August, and is in use a long time. The tree grows beautifully in the nursery, making very straight stalks. Young wood, dark brown, with large white buds. Fruit, from medium to large; color, red; flesh, fine-grained, with a sweet and acid mingled together, and of a spicy flavor, and with the addition of a little butter, makes a middling good pie, without spice or sugar. This will compare with Mr. Comstock's Garden apple, saving a grocery bill.

This apple brought in our market, 50 cts. per bushel, when other good apples brought twenty five cents per bushel. I sent a box of the Pie apple to Messrs. Elwanger and Barry, of Rochester, which they pronounced larger and better than the Early Strawberry.

Schuyler Worden.

Oswego, N. Y., Nov. 28th, 1846.

BUDDING FRUIT TREES.

Eds. Cultivator—I wish to corroborate the "improvement in budding" suggested by your correspondent, "R. T., Prospect, Conn." in your October number, and would state, that pruning *above* the place of inserting the bud, has been practiced by me with improved success. About the 1st of August, of the present season, I budded several small apple stocks, amongst the number was one, which in about two weeks thereafter, was entirely stripped of its leaves by caterpillars, the *larvæ* of which had escaped notice at the time of inoculating. The insects were promptly destroyed, soon after which, the inoculate started vigorously, as well as the leaves above, which in September were again full size. I then removed the top immediately above the inoculate, which is now, (Nov. 16th,) 14 inches in length.

In conformity with the above detailed *accidental* experiment, I would suggest that stocks to be budded be entirely stripped of their leaves *prior* to inserting the bud. The flow of sap to the extremities would thus be retarded, and a vigorous action on the inserted bud be induced. Soon after the inserted bud starts, the wood above should be removed.

Thus the danger of *losing* the stock, resulting from an immediate excision of the part above is obviated, and not only greater certainty of retaining vitality in the bud, but a growth of twelve or sixteen inches the first season, obtained.

The *practice* by this method, if as uniformly successful, must, I think, entirely supersede grafting, as the labor is less, the risk obviated, and every advantage secured. In the advantages of early budding, as suggested by your correspondent, R. T., I fully concur.

Chas. R. Smith.

Solon, Cuyahoga Co., O., Nov. 16, 1846.

GARDENING OPERATIONS.

It is well to be in readiness for the commencement of gardening operations at the earliest period which the state of the weather and the condition of the soil will admit. Some articles can hardly be put in the ground too soon after the frost has left it. This is the case with peas, lettuces, radishes, early cabbages, parsneps, spinach, parsley, &c. It is rare that these plants are killed by frosts that occur after the season has so far advanced that the ground has once become fairly settled.

For peas, the earliest varieties, such as the Early Washington, the Prince Albert, and the Cedo-nulli, should be chosen, and they should be planted on the warmest and most sheltered soils. Parsneps and spinach, also may be sown in the open air as soon as the ground can be worked.

It is a great advantage to give some plants a start in a hot-bed; particularly lettuces, cabbage, cucumbers, tomatoes, and egg-plants. By forcing in this way, several weeks may be gained over plants grown in the open air. The chief advantage of raising plants by this mode of artificial heat, is to have them in an advanced state by the time it will do to transfer them to the open grounds; but cucumbers and early radishes may remain in the beds till they are so far matured as to be fit for use.

In this latitude it is not deemed advisable to start hot beds until March, but farther south, they may be put in operation in February. It is of but little use to force plants which are designed to be afterwards transferred to the open air, until the spring has commenced, and there is a probability that the weather would not be so severe after they are set out as to seriously check their growth. It is an injury to keep them in the hot-bed after they have reached the proper size for setting out, as the effect is to "draw them up," as it is called, giving them long slender stems, which prevents their growth

Hot-beds should be sunk in the ground to the depth of eighteen inches or two feet. They require a large supply of moisture, and if made wholly on the surface, they dry up so rapidly that they must be watered a great deal. If, however, it becomes necessary to make the bed on wet ground, no excavation need be made, as the coldness of such a situation might prevent the manure from fermenting, if deeply placed in the earth. In vol. IX., p. 55, of the Cultivator, will be found some very good directions in regard to the construction of hot-beds.

The weather may be so cold as to render it necessary to use straw or mats to keep the air in the beds of requisite temperature. But they are liable to become at times too hot; hence they should be often examined, and the proper temperature secured by sliding the glasses; always admitting as much of the external air as the plants will bear. Water should be given frequently.

A deep mellow soil is all-important for gardens, and the use of the subsoil plow may be adopted to good advantage, in situations where teams can be made to do the work. In general, however, garden-work must be done by the spade. For most garden purposes, rotted manure is preferable. Composts, which were formed the year previous, and have been well worked over several times, till they have become thoroughly fine, are best for most purposes. A good compost is made of two parts stable or barn manure, two of peat or "muck," one of tough grass sods, and one of leached ashes; mixed as equally as possible in a heap. If put up in the summer, the mass will soon undergo a fermentation, and by being worked over and re-piled, it will be in excellent condition for use the next spring, and will show its good qualities on all kinds of vegetation.

Asparagus beds should be forked over as soon as the ground has settled, and a good dressing of compost worked in. Salt is also recommended as a dressing for asparagus, and we are of the opinion that it is beneficial. It probably operates favorably in two ways. Asparagus is said to be a marine plant, growing naturally in soils impregnated by salt water; hence it is concluded that salt forms an important part of its food. It will unquestionably bear a larger quantity of salt than plants generally; and by applying a liberal dressing of the substance to asparagus-beds, the weeds and noxious plants are killed, leaving the asparagus full possession of the soil.

DESULTORY HINTS ON GARDENING.

FROM VARIOUS SOURCES.

Asparagus.—A correspondent of the Gardener's Magazine, some years ago, stated that the most vigorous growth was produced where the land was imperfectly drained, and rather marshy. Very fine asparagus was grown where the beds were under water nearly all winter. A light, deep soil was considered as decidedly best.

Hoeing Garden Beds.—Loudon's Suburban Horticulturist says, "Mr. Barnes thins and hoes all his seedling crops with short-handled gooseneck hoes, with square-edged blades of different sizes, but chiefly of two inches in width. He uses two hoes at a time, one in each hand. He never has weeds pulled up among seedling crops, but always attacks them in the *seed-leaf* state with these hoes."

Ripening Grapes.—H. C. Ogle, in the Suburban Horticulturist, says, "I have seen grapes attain the darkest color densely shaded by leaves; and on the contrary, I have seen them only attain a grisly red color when light and the sun's rays were admitted to the utmost extent possible." Hence he disapproves of the practice of defoliating vines during the ripening of the to let in the light;—the deficiency of color in many cases, is to be ascribed to crowded crops, want of air, or bad culture.

Manure for Grapes.—The celebrated Brassin, conductor of the royal vinery of France, at first enriched his vine borders with strong and exciting manures; but he afterwards found that manures of slow decomposition were much better, the best mixture being composed of the cleanings of ditches, turf, and road sweepings, after being allowed to ferment a year.

Pillar Roses.—A correspondent practices the following mode of having pillar roses. Two-inch augur holes are bored through pieces of scantling 3 by 4 inches, and 12 feet long, one foot apart. They are then set in the ground as posts, 3 feet deep. Near them tall growing roses are planted, two of different colors, one on each side of the post; and as they grow, the stems are run through the holes. In this way, they will rise nine feet high, and no winds can blow the stems off—no tying is necessary. Branches intertwined, bearing roses of contrasted colors, made a fine appearance. The Boursalts, Hybrid China, and some of the varieties of the Prairie rose, furnish fine roses for these blooming pillars.

Early Lettuce.—Take up the plants, which have been sown in the open ground in autumn, and set them in a hot bed as soon as it is made, and they will be fit for the table two weeks earlier than those from seed sown in the bed.

Early Tomatoes.—It is well known that in removing plants of the tomato from the hot bed to open ground, they usually remain stationary for a considerable length of time before commencing growing. They may be accelerated if taken quite early from an early hot-bed, and each plant placed in a small pot, and kept in a warm room or other warm place, until the arrival of settled warm weather, when they are to be turned out and deposited in the ground with the balls of earth entire, which scarcely checks their growth. The small number of plants required for the supply of a family renders this process comparatively easy.

Box Edgings.—In watering these, which have been newly planted, in dry weather, it is of great moment where the earth is trod firmly to the roots, and before levelling on the remainder of the earth, to saturate the soil completely, all around the roots, with water, with an unsparing hand, and then finish by spreading the dry soil above.—*Loudon's Sub. Hort.*

Dibbling Small Trees.—Nurserymen often set out thousands of young seedling trees, or root grafts by dibbling. The manner in which many workmen operate, leaves a cavity at the lower end of the root, where the earth is not enough pressed against it. Such trees are apt to die; they will be found to draw out easily; and workmen need to be watched. It is necessary that the point of the tool be so thrust into the ground as to fill the hole, that the point may be considerably nearer the plant than the handle; that is, the line of direction should point towards the plant downwards.

Giant Asparagus.—A correspondent of Downing's Horticulturist, raises shoots of asparagus, which, he says, are without exaggeration, as large as his hoe handle, and perfectly tender and succulent, by this method:—One part of hen dung to forty parts of stable manure, are spread two inches thick on the bed, in autumn, and forked in. The next spring this is turned over slightly, and a coating of a quarter of an inch of salt added. This dissolves by rains, and kills every weed, while it promotes a vigorous growth of asparagus. He cuts his asparagus when about six inches high, *wholly above ground*, and then it is all perfectly tender.

Position of Flower-Beds.—It often happens that two different flower beds may be equally well managed and flourish alike, yet one may be a mass of brilliancy, while the other exhibits little or no beauty. There are many flowers which always face the light or the sun; consequently the beds should be so placed that the spectator in the walk or window, should look them *full in the face*. That is, the strongest light, and the position of the spectator should always be on the same side of the bed. This will be found particularly necessary with the pansy or tri-colored violet, and some other of the smaller flowering plants.

Best Sites for Fruit Gardens.—Edson Harkness, of Peoria, Ill., who has had much experience in fruit raising, makes the following statement in relation to the culture of the peach and grape, (which are partially tender,) which will be found to contain valuable information to western fruit cultivators, and which fully accords with experience elsewhere. "The peach and grape flourish best upon our highest lands, and upon a thin soil; and it does not seem expedient to cultivate these fruits extensively on any other. The beautiful, gently swelling hills, called mounds, which are found interspersed all over our prairie country, are, so far as tried, peculiarly adapted to the culture of the peach and the vine. The exemption of the mounds from frost, after vegetation starts in the spring, gives them a great advantage over lower situations. During the last ten years, the wild grapes upon our highest lands have not been injured by frost, while in the low lands or hollows, they have been destroyed nearly every alternate year. And when the peach trees are injured by the winter in every other situation, those on the mounds escape.

The Minister Apple.—This apple, first brought to notice by the late Robert Manning, has lately been recommended by various writers as one of the very finest of all fine apples. From a full examination of specimens produced in western New-York for two years past, the writer has been unable to place it higher than second rate in flavor, though a fine-grained, large, and fine looking apple.

Fruit Trees Gnawed.—A correspondent of the Gardener's Chronicle, finds that a mixture of soot and milk, applied with a brush to fruit trees, protects them from rabbits. According to Downing's Horticulturist, a mixture of tar and milk, in proper portion to be of the thickness of paint, is a good application.

Cranberries on Upland.—A. Burnham states in the Massachusetts Plowman, that he set out cranberries from the swamps, on good corn ground, of a loamy character, in hills to admit the cultivator, and clean hoeing. A part had six inches square of muck on the roots, and others none; both did equally well. The transplanting was done early in spring; they bloomed about mid-summer, and bore fruit the same year. "The fruit," he states, "is large and handsome, many of the hills yielding a pint of berries." T

PREMIUM CROPS OF VERMONT.

We have often thought, that in regard to climate and natural advantages, too much importance is given to the idea, that the south and southwest portions of the country are superior to the northern and New-England states. Some people, for instance, appear to entertain the belief that Vermont is located so far in the Boreal regions, that she must ever be subject to an ungenial clime, and prevented from being distinguished as an agricultural state. Perhaps a lingering idea of this kind in the mind of the writer, was one cause of the agreeable surprise he experienced when he for the first time passed through a portion of the Green Mountain state. The section alluded to is composed chiefly of the counties of Rutland, Addison, and Chittenden. Perhaps there are other portions of the state of equal quality; but we can safely say, that we have never passed through three counties of any other state, where the general condition of things indicated a more independent and intelligent agricultural population.

In amount and value of agricultural products, also, it is believed that some parts of Vermont are not behind any other section of the country. It has been stated by one who had carefully examined the statistical returns, that the county of Caledonia, (the northern boundary of which is only twenty-five miles south of the 45th degree of north latitude,) produces more in proportion to its farming population, and the number of cultivated acres, than any part of the Union. [See Cultivator, new series, vol. 1, p. 273.]

We have been led to these remarks from having lately seen in the Vermont papers, notices of the premiums awarded for crops grown last year, by various county agricultural societies in that state. We give herewith a brief abstract of the yield of the crops of wheat, corn, and oats, which received premiums.

The premium crops for *winter wheat* in the county of Addison, were 59 bushels 12 quarts per acre, for the crop which took the first premium, and 39 bushels for that which took the second premium. For Chittenden county, the premium crop was 41 bushels per acre: for Windsor county, it was 35⅞ bushels, for the first premium, and 28 bushels for the second; for Franklin county, it was 38½ bushels.

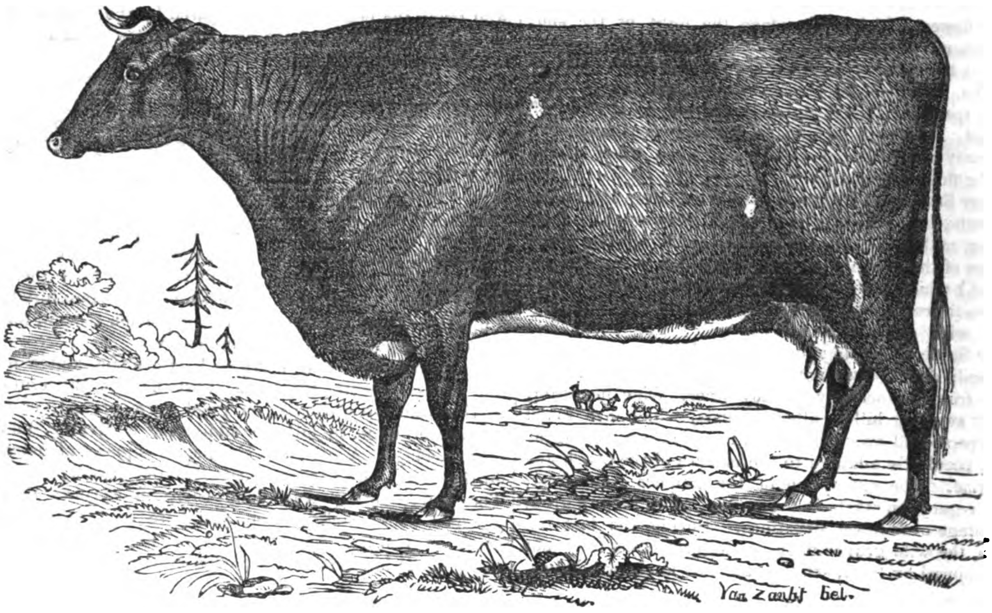
For *spring wheat*, the yield of the crop which took the first premium in Addison county, was 56 bushels per acre, and that which took the second premium, 40 bushels per acre; for Chittenden county, the yield of the premium crop was 31 bushels per acre; for Rutland county it was 27¾ bushels; for Windsor county, 32 bushels, for the first premium, and 31¼ bushels for the second premium.

For *Indian corn*, the yield for the crops which took the first and second premiums in Addison county, were 113 bu., and 82⅓ bu.; for Chittenden county there were four premiums, and the yield of the respective crops was as follows:—94½, 93, 85⅓, and 80, bu. per acre; for Rutland county, the premium crop was 88 bu. per acre; for Windsor county, 119 bu., and 106 bu. per acre; for Franklin county, there were four premiums, and the respective yields were 101½, 100, 74½, 73¼ bu. per acre.

Of *oats*, the premium crops of Chittenden county were 67 bu. and 64 bu. per acre; for Rutland, 83¾ bu.; for Windsor county, 93¾ bu., and 80 bu.; for Franklin county, 63 bushels.

We notice that in Franklin county a premium was awarded for 960 bushels of *carrots* produced on an acre.

These would certainly be considered remarkable crops for any part of the country; and they indicate the spirit which we are confident pervades the farmers of Vermont to a wide extent, for the advancement of improved agriculture. Nowhere is a more general inquiry awakened, or a more liberal patronage bestowed on agricultural publications, and we cannot doubt that the legitimate results of this spirit are evinced in the prosperous condition of the farmers and the bountiful crops they obtain.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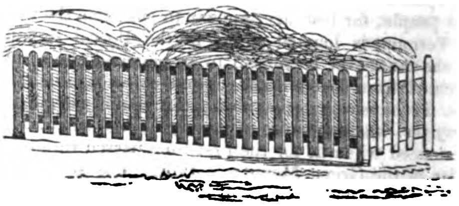
MR. VAIL'S LADY BARRINGTON IIId

EDS. CULTIVATOR—As you are about giving to the public, through the medium of the Cultivator, a portrait of my imported Durham cow, "Lady Barrington, 3d," to which animal was awarded the first premium for the best Durham cow in the first class, at the New-York State Agricultural Society's show, held at Auburn, in September last, I have thought it might be of some interest to accompany the portrait with her pedigree, and an extract of a letter I received from THOMAS BATES, Esq., of Yorkshire, England, her breeder, and from whom I purchased her. The following is the pedigree, as given by Mr. Bates:—

"Lady Barrington, 3d, bred by Mr. Thomas Bates, of Yorkshire, England, calved 22d February, 1840. Got by Cleveland Lad, (3407;) dam, Lady Barrington, 2d, got by Belvidere; (1706;) g. dam, Lady Barrington, 1st, by a son of Mr. Mason's Herdsman, (304;) g. g. dam, Young Alicia, by Wonderful, (700;) g. g. g. dam, Old Alicia, by Alfred, (23;) g. g. g. g. dam, by Young Favorite, by a son of Favorite, (252.) Cleveland Lad, (3407,) the sire of Lady Barrington, 3d, was awarded the highest premium at the Royal English Agricultural Society show, at Liverpool, in 1841, and also the same year the highest premium at the Yorkshire Agricultural Society's show, at Hull, and he is now in the possession of Lord Feversham, at Duncomb Park; his grandsire, Belvidere, (1706,) was sire and grandsire of the Duke of Northumberland, (1940.) Lady Barrington, 1st, was bred by Lord Barrington, and this was his favorite tribe of cows from 1794, and I bought my first Lady Barrington in 1831, after his death. This tribe of cows generally breeds females, and will breed well to your Wellington Bull."

I will add that this cow was awarded the first premium at our Rensselaer Co. show last autumn, and is a good milker. She gave 22 quarts of milk a day, previous to sending her to the Auburn show, and is the m of the bull calf (got by my Wellington bull,) which ld about a year ago, to Col. Hampton, of South Carolina, when about 4 months old, for three hundred dollars. Respectfully yours, &c. GEO. VAIL.

Troy, Feb., 1847.



FODDER RACKS FOR SHEEP.

ONE of the best and most convenient forms for fodder racks is represented in the above figure. It consists of short scantling posts, into which horizontal rails about two and a half by four inches, are mortised, and on these are nailed the upright strips of boards three inches wide, and an inch thick. A wide board forms the bottom. A common carpenter will make two or three of these in a day; and a very few are enough for a large flock of sheep. They are ten or twelve feet long.

More hay is trodden under foot and spoiled during the changeable and muddy weather of early spring, than at other times; and those who are not already properly supplied with feeding racks, should provide them without delay. T.

LUNAR INFLUENCE.—Duhamel cut a great many trees in all ages of the moon, but under other circumstances precisely similar; but in all his experiments, discovered no difference in the timber. Chauvalon, at Martinique, tried accurate experiments on many kinds of vegetables in the same way, planted at different times in the lunar month, but discovered no appreciable difference.

MODE OF CULTIVATING PREMIUM CROPS.

INDIAN CORN.—JABEZ BURROWS, of Chautauque Co., N. Y., obtained a premium for a crop of 114 bushels and 32 pounds of shelled corn grown on one acre. This crop grew on what had been an old pasture, which was turned over the latter part of May; it was then rolled, and twenty wagon loads of barn-yard manure spread on and harrowed in; it was marked out in rows three feet apart one way, by fastening four chains to a pole carried by two men; it was planted on the last day of May, in hills sixteen to eighteen inches apart in the rows, three kernels to a hill, of eight-rowed yellow corn. It was hoed twice, and harrowed, (number of times not stated,) between the rows. The yellow eight-rowed corn was chosen for planting in preference to the "Brown corn," so called because the former was thought to be earlier. The corn was weighed at fifty-six pounds to the bushel, and the cobs weighed 14 lbs. to the bushel of shelled corn.

LEWIS B. and EDWARD A. POWELL, of Madison Co., N. Y., received a premium for a crop of 105 bushels and 25 pounds from an acre. This crop grew on land which had been pastured for six years previous—the soil gravelly. It was plowed the first of May, harrowed and furrowed for rows, six to the rod, (or two feet nine inches apart.) The corn was planted on the 7th of May, in hills 18 inches apart in the row. Seventeen loads, of manure (quantity to the load not stated,) had been put on the ground the previous November. The corn was hoed three times.

BENJAMIN ENOS, in the same county, obtained a premium for a crop of 111 bushels and 52 pounds on an acre. This crop grew on land which had been mowed for the last five years—without manure during that time—the soil gravelly loam. The whole lot in which it grew contained two and one-fifth acres. In the fall of 1845. 20 loads of manure were put on the lot, and left in large heaps; and in the following spring 80 loads more of coarse manure were put on, and it was all spread and plowed in about the first week in May. After plowing, 80 loads of fine manure from sheep-sheds, was spread on the field, and it was then thoroughly harrowed. It was furrowed slightly for the rows, three feet apart, north and south, and the hills made at distances of fourteen inches in the row. It was planted the 18th of May, with the "large white-flint eight-rowed corn." A cultivator was passed through the rows as soon as the corn was large enough to follow the rows, and it was hoed, and two bushels of plaster applied per acre. It was also worked with the cultivator, and hoed about the 20th of June and on the 7th of July.

BARLEY.—HENRY BREWER, of Tompkins county, N. Y., raised, last year, a crop of two-rowed barley which yielded at the rate of 50 bushels per acre, 48 pounds to the bushel, and also a crop of Emir or skinless barley which yielded at the rate of about 40 bushels per acre, weighing 60 lbs. to the bushel; quantity of land, about one acre each. These crops grew on a soil described as "a sandy loam, mixed with slate gravel." It is called "a very dry, warm soil, but had been *hard run* for the last ten years." The crop on the ground the previous year, was corn, to which 20 loads of barn-yard manure had been applied. For the barley, the ground was plowed once, and harrowed, and a bushel of plaster applied per acre. Three bushels of Emir barley were sown per acre, but it is stated to have been too much, making the stalks too much crowded. Two and a half bushels of the two-rowed barley were sown per acre.

E. S. SALISBURY, of Jefferson county, N. Y., obtained a premium for a crop of 5 acres and 24 rods of barley, which yielded at the average rate of 55 bushels and 20 quarts per acre, weighing 48 lbs. to the bushel. The soil where this crop grew is said to have been "a mixture of clay and sandy loam." The previous crop had been winter wheat on a summer fallow, without any manure. On the 5th of May last, it was well harrowed, before being plowed; it had been plowed to the depth of eight inches, in the month of November previous. It was plowed on the 6th and 7th of May last, and harrowed again before sowing the barley, which was sowed on the 8th of May, at the rate of 3¼ bushels of the two rowed variety to the acre. No manure was applied to the barley.

SPRING WHEAT.—HART MASSEY, of Jefferson Co., N. Y., obtained 23 bushels of spring wheat from an acre, though he states that he had "straw sufficient to have given 40 bushels per acre, but was reduced by the weevil [*Cecidomyia tritici*,] to 23 bushels." The land had been in corn the previous year, to which a "moderate dressing of manure had been given. The wheat was sown the fore part of May, three bushels to the acre. Four bushels of salt were also sown to the acre, and harrowed in with the wheat. He states that he left a small piece on which no salt was sown, and that the wheat on the salted portion came up most healthy and continued so till harvest, when it was heavier and the heads longer than that from the portion without salt. He has not been able to ascertain at what time wheat should be sown to escape the "weevil."

E. D. ALLEN, of the county last named, obtained 25¾ bushels per acre. The previous crop had been corn and potatoes, on "green sward," with ten loads chip and barn-yard manure." Eight loads of barn-yard manure were applied to the poorest part of the piece before sowing the wheat. It was sown on the 28th of April, 2½ bushels of the Black Sea variety, per acre.

ELIAS BATES, of Windsor county, Vermont, obtained a premium for a crop of 36 bushels on one acre and twenty-nine rods. The land had been mowed for "a number" of years previous to 1844. In that year it was planted to corn, manured with 20 loads of barn-yard manure, and five loads of dust from a coal-pit bed. Twelve bushels of ashes were also put on the corn after it was up. The piece was plowed for wheat about the first of May, and a bushel and a half of seed, washed in strong brine, and afterwards dried off with slacked lime, was sown per acre, the first week in May.

SWELLING OF GRAIN BY BOILING.—The Edinburgh Journal of Agriculture, gives, in the following table, the increase of bulk in different kinds of grain boiled for domestic animals to bursting:—

4	measures	of oats	increased to	7	measures.
4	"	barley	"	10	"
4	"	buckwheat	"	14	"
4	"	Indian corn	"	13	"
4	"	wheat	"	10	"
4	"	rye	"	15	"
4	"	beans	"	8½	"

A good farmer of our acquaintance said that from long experience he considered the value of corn for hogs increased by boiling in the ratio of 25 to 10.

MILKING CLEAN.—Experiment has shown that the milk last drawn from the cow is from ten to twelve times richer than the first drawn portions, or contains from ten to twelve times as much cream.

DOMESTIC ECONOMY.

CHURNING BUTTER.

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Eds. Cultivator.—I have seen and read "Mary's" complaints about not getting her "butter to come," with much interest; and although I may not be able to point out the *cause* of failure in her case, I believe she may obviate it in future, by a different management, both in feeding "Brindle" and taking care of her cream.

I have been equally unfortunate with Mary—having failed "five successive times" in getting the butter, and gave it up in despair; but not until the patience of every one was tired out with churning. Until within the last three winters, I generally had much trouble in churning, and when the butter did come, it was almost colorless, bitter, and anything but in proper order for printing.

Since then, my husband has entirely changed his plan of feeding—from hay to corn fodder,—[which I am informed is cut and ground up by machinery, stalks and all, at the rate of fifteen hundred to two thousand bushels a day,] fed dry in the troughs, [after the cows eat their meal—corn and oats ground together,] at the rate of 1 to 1¼ bushels, pressed measure, for each cow at a feed.* Since adopting this plan, and while so fed, I have no difficulty in churning; the butter is of the best quality, and a fine rich color; indeed, the difference is so plain from a change in the feed, that I am not satisfied after the grass is gone, until I hear that a good stock of fodder is prepared—the winter season being *my harvest* for selling butter—selling then at nearly double price, if a nice article.

I keep the cream in a warm pantry, (adjoining the chimney, where a constant fire is kept,) in which the temperature is nearly equal to summer heat; and think it much better than setting it near the fire; where it is almost certain to get too warm; and then insipid, white butter is the consequence. I hope Mary may succeed better in future; and am satisfied she will, if the above plan is adopted and persevered in.

Yours respectfully, Ann.

Timely Hint—Soot in Chimneys.—Towards the latter part of winter, it often happens that the soot in chimneys has become much accumulated, and large fires built in windy weather caused it to take fire and burn with violence, throwing out from the top of the chimney large masses of flame and smoke, and many sparks and burning flakes of cinders fall on the roof. If the shingles are dry, the danger is iminent, and many house-burnings doubtless originate in this way, more especially if this happens to take place in the night. To remove the difficulty and danger, burn out the soot in calm wet weather, by setting fire to straw properly placed in the chimney for this purpose.

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Correction.—Under the head of "Domestic Economy," in our January number, is a recipe for making "Soap for washing White Clothes," in which, by mistake, [of the printer, of course,] "*one ounce*" of salsoda is given, instead of *one pound*.

Russian mode of using Buckwheat.—The seed is first pressed through a mill, by which process the kernel is freed from the hull, and each seed is divided into two or three parts. The ordinary mode of cooking it is as follows:—A common earthern pot or pipkin, generally unglazed, of a size corresponding to the number of persons intended to partake of its contents, is filled about two-thirds full with the grain, and the remaining third nearly filled with fresh water; the pot or pipkin is then placed in an oven sufficiently heated to make the water boil slowly, and to keep it boiling till the whole of the water has disappeared and the grain begins to dry, when the heat of the oven may be diminished; the contents thus booome gradually sodden; it swells and commonly projects over the top of the pot, when it forms a thick dark-brown crust. When this appears to be dry and begins to crack, it is ready for use, and being covered with a plate or saucer, should be sent to the table in the pot, as it has been prepared. When used, the crust should be first removed, and a piece of butter and a small quantity of salt added to the grain, and the brown crust broken up and mixed with the pottage below. Thus prepared, it forms a most agreeable, substantial, and nutritious article of food. It is a favorite and daily dish with the peasantry and working classes of Russia, who would not exchange it for any other article of food.—[*Condensed from Dr. Keir's communication in the London Farmer's Magazine.*]

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To boil Salt Meat Tender.—The Amer. Agriculturist says, "Put the meat over the fire in *cold* water, and never suffer it to boil faster than a gentle simmer, or it will be hard and tough." Placing it in cold water and heating gradually is an excellent recommention; but what is the object of boiling it so carefully with a gentle simmer? Water, if it boils at all, or if it boils as violently as fire can make it, is equally and at all times at 212 degrees, (under ordinary circumstances,) and the meat must consequently cook precisely as fast in one case as in the other.

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Salsify or Vegetable Oyster.—We could never perceive much resemblance in the taste of this vegetable to the real oyster; but we know a person who cooks it in such a manner that every one that tastes it, pronounces it delicious. The mode is as follows:—Salsify is scraped and washed; then cut into thin pieces across the roots, boiled, in just sufficient water to cover them, till they are very tender. When done, they should be dressed with vinegar, pepper and salt, and a little butter; or instead, a dressing of eggs and flour beaten together and poured over them.

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To cook Parsnips.—Persons who have never eaten parsnips cooked according to the following mode, have no idea what an excellent dish they are:—Scrape the parsnips, wash and slice them lengthwise; boil in just water enough to cover them till thoroughly done. Then put in a piece of butter, with a little salt and pepper. Beat up an egg with a spoonful of flour, and pour over them; they are then ready to dish up. Parsnips are likewise very good, split once and roasted with pork in the dripping-pan.

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To Remove Dust from the Eye.—Immerse the affected eye in a vessel of clear cold water, and then rapidly open and shut it a few times, when the dust will be washed away.

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* I think the cows would give more milk if the meal and fodder were mixed together and moistened; but the men say this takes too much time; and if mixed without moistening, the fodder is thrown out by the cows, to find the meal. I use the old fashioned barrel churn; but my "old man" has promised me one of Kendall's, which he says is the best constructed churn he has ever seen; not any more objectionable in the point alluded to by Mary, if proper care s taken to clean it after use so as to prevent the iron parts from usting,

THE FARMER'S NOTE BOOK.

Experiment in the Culture of Indian Corn.—Mr. Julius Hubbard, of Stockholm, St. Lawrence Co., informs us that by the use of a compost mentioned in the Cultivator for 1845, page 89, he raised last year as much corn from two acres as he has usually done from five; but he does not state the precise amount. The compost alluded to, is described in a communication from Mr. Charles Colfelt, of Pennsylvania. We herewith republish the mode of preparing it:

"Twenty-five bushels leached and unleached ashes, ten bushels plaster, sixteen bushels lime, and about fifty bushels fine sheep manure, mixed the whole together on the barn floor, and dissolved the lime with beef and pork brine. After thorough mixing, the compost heap had the appearance of the grey plaster. I put one handful in a hill of corn, till I found I should not have enough to go over the whole field, when the quantity was reduced to a handful to two or even three hills."

The operation of this compost we have no doubt would be good; but it is questionable whether all the substances of which it is formed, combine in such a manner as to produce the best results. For instance, lime and sheep manure are incorporated together. According to chemistry, this is "against all rule." The effect of the lime would be to dissipate the nitrogen of the manure, which is its most valuable principle. The nitrogen exists in the manure in the form of *carbonate of ammonia*. The lime, having an affinity for carbon, unites with the carbon of the manure and sets free the ammonia, which is thus lost. Hence it is an established rule that lime should not be mixed with animal manures. If any doubts remain in regard to the matter, we would recommend that those who use the compost should make a fair trial by applying to alternate rows of corn that which contains lime and that which has none, noting the growth of the crops and the product.

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Deep Plowing.—Extract from a letter to the Cultivator, dated Zanesville, Ohio, Jan. 16th, from "J. L. C." "For the last few years, I have been trying to reclaim an old farm that had been pretty well 'used up' by shallow plowing. Some six years since, we plowed an old field, (giving it first a good dressing of manure,) about six or seven inches deep. It had previously been plowed about four inches, and some of our 'knowing ones' told us we were killing it by turning up the yellow clay; but nothing daunted—and following the maxim, that if we try our own plan and fail, we have no one else to blame for it, we persevered, and had a pretty good crop. Being encouraged by this, we made another trial, of a similar nature. The field had been much washed and gullied, it being more hilly than the former. After filling the gullies, and "leveling up" some of the deep hollows, and applying a dressing of manure, we plowed it in a simalar manner to the former, sowed oats, and had a tolerable crop; in the fall we plowed again, with three horses. This time the plow went some nine or ten inches deep, bringing up portions of manure with about three inches more of clay subsoil, and left the stubble some inches below the surface. It was harrowed well, and sowed to wheat: and I had about thirty bushels to the acre. This was the summer of 1845, when some of our neighbors did not get five, and but few got twenty bushels per acre. As we failed to get it in grass, we plowed again about twelve inches deep, with four horses, and sowed another crop of wheat, which last harvest averaged thirty-five bushels per acre. As was stated, the fields were very much washed and gullied, which, in part, I charge to shallow plowing, for when the ground is mellow, but a few inches deep, the rains soon saturate it, and it becomes so thin that it slips off almost bodily to the hard subsoil, or forms small gullies which soon run together and make large ones; but when plowed deep, the rain is taken up by the soil, which, being so much more mellow, it seldom has a tendency to run off, but is retained in the earth to give nourishment to the crop; whereas, in shallow plowing, if it does not wash off, the soil is so thin that a few hot days penetrate and dry up all the moisture. And farther, not one of the old gullies have washed out, although we have had some very hard showers, and where you could formerly bury a horse, now there is no trace of such a wash."

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Charcoal as Manure.—Mr. John Moxon, of Monroe county, N. Y., wishes some information on this subject. He says—"Mr. Pell, of Ulster county, in the Cultivator for 1844, p. 183, says he obtained nearly eighty bushels of wheat per acre, by the use of fifty bushels of charcoal per acre. Not doubting its correctness, I would remark, that such a result has doubtless induced him to repeat the experiment. Two or three repetitions would establish it as a fact in certain conditions of soil, and this fact would thus become the property of your readers, many of whom would be glad to avail themselves of it. What I wish particularly to know, is, the nature of the soil where the charcoal was used, whether light or heavy, and whether it had been manured within four years previous. I have got a pretty large pit of charcoal, and I am puzzled how best to pulverize and apply it. Perhaps Mr. Pell would take the trouble to state somewhat at length the mode he adopted, and thus oblige all your readers, and confer a favor on myself for which I shall be thankful."

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Sulphate of Iron.—It has been suggested that copperas, (*sulphate of iron*,) might be advantageously substituted for gypsum, (*sulph. lime*,) as a fixer for the volatile ammonia of dung-hills. I have studied the matter a little, and if I do not err in my calculations, there would be no economy in using it for that purpose; for with a liberal allowance for impurities in the common plaster of commerce, the sulphuric acid of a definite quantity of it, will combine with at least three times as much ammonia, as that of an amount of copperas, which could be purchased for the same money, at the usual prices of both articles in the city of New-York. As, however, the copperas can be used in a state of solution, and so act more readily upon decomposing materials, (sulphate of lime, being but very slighty soluble,) there are, probably, some situations in which it would be profitably employed. F. L. O.

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The Cultivator for January.—On looking over your paper for January, I am induced to request the American press, generally, to copy your notice of the Veterinary School at Alfort, in France. It has a favorable influence there; but in this reading, inquisitive country, through the medium of the press, the benefits of such institutions would be immense.

Your notice of the hay-fork induces me to say, that I have used Partridge's manure and hay forks for fifteen years, and have not found their equal. They are cast-steel, and should be used as such. If there is any failing in them, it is in the handle, which is not always right. My manure forks, which I have had in use these fourteen years, (saving the length of the tines,) are as good as ever.

I wrote you in the fall in regard to the potato rot. I am now confirmed in the belief that the rot was not one-twentieth as bad in '46 as in '45, in this state, and I feel encouraged that it will not be known, with us, to any extent the coming year. Fearing I should have to take my potatoes from my cellar, as I had to do a year since, the whole of them were put in unsorted; they have this day been sorted, and not one bushel in a hundred were found defective. They are the Chenango, or Mercer, Hill's Early, and St. John's. My "White blue-noses," from Robbinstown, all sound, and as usual, none better. The latter give a poor yield, are quite early, and very fine as an early or unripe potato.

I saw Mr. Sotham's fine field of Swedish turneps last fall. They were all he says of them, and I can commend the culture of them on his practice, with his skill; but as Mr. Stevenson may have no "Sothams" in his region, I would suggest he tries, in common with Mr. S.'s practice, the following:

Let a piece of sward land be broken up soon after the grass is taken from the ground in mid-summer. Cross-plow it in about a month after the breaking up, when the sod will be found quite rotten. Let it lay a few days till it is dry and crumbly, then harrow, and put on twelve loads of good rotten manure to the acre; plow it in, and let it remain till the following June. At that time plow it; then harrow with a light harrow; ridge it as close as convenient, with a horse and plow; rake the top of the ridges, and sow 2 lbs. of seed to the acre on the ridges, with a drill barrow. When up, and in the third leaf, weed and thin the plants to four inches distance. Before the weeds get an inch in height, weed again, and leave the plants from four to eight inches distance; keep them free from weeds, and the yield will be great. Or, if desirable, the land being in order, you can sow the Norfolk turnep, from (with us,) the 10th of July to the 20th of August—quantity of seed, a common thimble full to two rods of land, evenly sown. Roll the land after sowing. Sow after the harrow, broadcast, and let them take their chance, and the yield, if a favorable season, will be about 300 bushels to the acre. In the last method there is no weeding, and consequently a great saving of labor.

Allen Coffin's account of fruit-growing at Martha's Vineyard, and the growing of the finest fruit by Mr. Tudor, at Nahant, shows that no one should despair. It can be grown with skill on the Nahant rocks, and on the sandy barrens of the Vineyard, open to the boisterous winds of the Atlantic.

I have no faith in stifling borers while in the tree. Many mistake the hole which they come out of for their entrance. Diligent search, and with a piece of wire, bearded at the end, run into the hole of their entrance, which is generally indicated by its pumice-like borings, and with a practiced ear and eye, they may be drawn out. An easy method of extirpation would be of immense benefit to the country.

Thorough draining and subsoil plowing are in their infancy in this country; but their good effects have been proved with us. I have laid some drains thus: Main drain three feet deep and three feet wide, filled with stones placed on the bottom edgewise; chestnut rails, 6 inches in diameter, two courses, on the stones, and then the ditches filled up with quite small stones to half of the depth; then covered with the inverted sod, and filled up. The other drains were dug two and a half feet deep, and filled as the main drain except with one rail. I have also drained my lands in a measure, by digging the trenches for my walls deep, filling in with small stones and placing my wall on them; the walls stand better, and these drains, I think, will never get filled or choked. They are quite economical.

The Orange Quince is the only one I know of worth growing; the others are a leathery indigestible fruit.

The swine at the Massachusetts Hospital, Worcester, which are permitted to live, grow finely. This we have witnessed together. The true Mackay breed will still take the lead. NORFOLK. *Mass. Jan.* 1847.

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THE JERUSALEM ARTICHOKE.—Your notice of Jerusalem artichokes, in the December number of the Cultivator, causes me to say to you, that I can furnish any one who might want the article, with a few barrels, at $4 per barrel, delivered in Norfolk, Va. By the four or five barrels the price could be reduced to $3.50. I commenced the cultivation of artichokes in a very small way, in '45, and more largely in 46, and from their hardy and productive quality, have but little doubt they will prove a very profitable crop for stock—especially for hogs. I design to plant them in a peach orchard—turn hogs upon them when ripe, and let them remain until April. In this way the trees would be cultivated by the rooting, and the fruit, no doubt, would be more perfect, and free of worms, as the latter would be thrown to the surface, to perish by cold, or be devoured by birds, as well as swine. I think it probable enough roots would be left in the earth, to save the trouble of re-planting from year to year, if hogs were not suffered to remain on them too long. JNO. R. TODD. *Near Smithfield, Isle of Wight Co. Va., Jan., '47.*

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TO GET SUBSCRIBERS TO AN AGRICULTURAL PAPER.—Take one yourself, and be sure to read it, and ponder well upon its contents. When you find an article in it, from which you can draw a hint whereby your own operations can be aided, or your system of doing things improved, take that hint and carry it out in the manner best adapted to your necessities, so that your neighbors may see the benefit you derive from *reading* and *reflection*.

Do not condemn your paper because you find many things in it not immediately calculated for your soil and climate. Remember the object of the Editor is, "the greatest good to the greatest number," of your profession; therefore what will most directly benefit you may not in the least aid others, and yet he may often give you information of universal practical value. A short article may often be of more value to the mass of readers than twice the subscription price, so that you may often get your money back again, and secure a vast amount of valuable information with regard to other farmers' management, in the bargain.

When yom meet a brother farmer, do not begin to talk politics, mutter over the Mexican war, nor enter very deep into the particular guessing of your neighbors's doings, but let the vein of your discourse be on some topic relating to improvements in agriculture, or farming, if the term suits you better. Show clearly and conclusively that the advancement of your profession is a primary object, in your estimation. Remember that *men make professions* honorable and give them importance, while mere profession never made a man in the world; much less has it put *one idea* into a brainless scull.

After you get your neighbors waked up a little on the subject of talking about farming, tell them the advantages of papers devoted to the subject; then enlist an energetic individual in each school district in your place, to go over that district and get subscribers for the paper of your choice. But if you find a man who subscribed last year, that draws a long breath, and says he "don't see much use in them," go along and leave him; the sooner you get out of the atmosphere of an individual who has received such a paper one year, and found no benefit in it, the better. You may conclude that he has not read it, or if he has, it has been in so sleepy a manner that he needs to read it over again, so that when he wakes up, he has a full year's stock of intellectual food on hand. But with all others, argue the matter fairly, and probably three out of five will subscribe, and in this way, in going over the town, you will get up a respectable club, and thereby receive your papers at a liberal discount.

But do not stop talking; carry the idea along with you that your business is a topic worthy of consideration and remark. *Keep up* the interest when you have excited it, and you will find it gaining the strength of numbers and of talent continually, and in a short time you will find no difficulty in, as often as once a year, at least, raising a *club* to take agricultural papers, and in the end, you will see the value of your farms and of their stock increased, and the mental energies of the farmers around you gaining assurance of strong and richly cultivated intellects. W. Bacon. *Richmond, Mass., January* 15, 1847.

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Anthracite Coal Ashes.—Having observed many years since, the beneficial effects of Anthracite coal ashes as a top-dressing for grass, I carefully apply them in that way. For the double purpose of separating the ashes from the coked coal, (which is good fuel for stoves and green-houses) and avoiding the unpleasant labor of hand screening, I have had a rough shed constructed in an angle of terrace walls, into which the ashes are dumped upon a sand screen, and the coal and ashes fall into separate apartments, out of sight and the weather, and all danger from fire precluded. I annex a vertical section of the contrivance. Anthracite coal is an invaluable blessing to this cold transmontane region. It is the cheapest, safest, and least troublesome fuel in the world. It keeps our dwellings and green-houses at a uniform temperature during the long winter nights, and what is very desirable in the country, the cook always finds her fire ready for preparing early breakfast. All *labor-saving* machinery is peculiarly valuable in this country. It diminishes the number of our "helps," who are often *no helps*, (*lucus a non lucendo*,) and fills up the country with a kind of dumb population, which gives no trouble. But whether the ashes are screened or not, they should not be thrown away,—for when plowed into stiff soil they improve it mechanically and chemically, as incineration would lead us to expect. Evelyn.

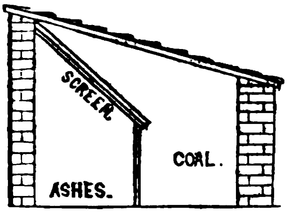

Fig. 00.

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Dr. Lee's Criticisms.—In the first number of the current volume of the Cultivator, an attack of Dr. Lee was noticed, showing that he had strongly censured me for doing the same thing which the most eminent chemists had done, and which he had himself done in a more glaring degree; and also glancing at his error in asserting that animal excrements were no *better* as manure than water and dried vegetables. He has again appeared with nearly two columns in his paper, in which he avoids the original matter in dispute, and attempts to make his readers believe that I hold the opinion, that animal substances are secreted "*out of nothing*." He builds his argument on this point on the very singular assumption, that the terms *secrete* and *create* are synonymous. He must know that I have not advanced any such absurd position; and I ask him, candidly, if he is not bound, as a just and honorable man, to retract his former censorious and uncalled for remarks, now that I have shown their injustice, which he himself tacitly admits, by attempting a new issue. J. J. Thomas. *Macedon, 2d mo.*, 4, 1847.

Unsuccessful Experiments.—In the Cultivator for June, 1846, is an account by J. E. Macomber, of his success, or rather want of success, in rearing and fattening swine. I was much struck with the details at the time, and concurred with him in the opinion, that farmers should sometimes favor the public with an account of their unsuccessful experiments; for, in farming, as in other pursuits, "it is not all gold that glistens." To publish only the enormous products and profits that are sometimes obtained, is too much like proclaiming the cures effected by quack medicines; while the thousands, yea, millions, that use those medicines without benefit, are left nnnoticed.

Poultry.—In some of your former numbers, I have mentioned my success in keeping poultry, &c. I will now give you the other side of the picture. Having for a few years past, had many more calls for choice breeds than I could supply, I determined, about a year since, to give increased attention to the subject of breeding poultry, and during the last spring and summer I set over seven hundred eggs, from some ten different breeds and varieties. I took special pains to obtain the best kinds of food for the chickens, and to have them at all times well taken care of; but the result is, only about one hundred lived to grow up. There seemed to be a general conspiracy against them among all their enemies, and all the elements—such as cats, rats, skunks, weasels, lice, cold, heat, rain, sunshine, and innumerable other things. In balancing the profit and loss, I find the loss greatly to preponderate this year. But, an occasional failure should never discourage any man, and past losses should only stimulate to increased exertions for the future. H. A. Parsons. *Buffalo, Dec.*, 1846.

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Broom Corn.—Noticing a statement in the Maine Farmer, that "the rapid deterioration" of broom corn, "has of late become a subject of universal complaint," with a comment that "*if planted near, or by the side of Indian corn, it will inevitably mix, and in a short time assume the characteristic features and qualities of the former;*" I deem it a duty to give to such erroneous views, a positive denial, which I do without having ever cultivated it; but I base my assertion on the immutable basis of the eternal laws of nature. Indian corn is of the genus *Zea*, a native of our country; broom corn is of the genus *Sorghum*, a native of India, and the one can no more be changed to the other, than wheat can be changed to chess, or than a horse can be changed to a camel, by occupying an adjoining stable. It is full time that such silly notions, with all the moonstories, witchcraft, ghost, and hobgoblin tales, and all other supernatural pretences, should be consigned to oblivion, and not render their propagators the laughing stock of every well informed mind. I presume the sole cause of the so-called deterioration of broom corn, at the east, is an improper course of culture. Let them visit the farms at the German Flats, on the Mohawk, and take a lesson for future guidance. Wm. R. Prince. *Flushing, Jan.* 25, 1847.

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Recent American Patents, reported for the Cultivator, by Z. C. Robbins, Mechanical Engineer, and Attorney for procuring patents, Washington, D. C.

For an improvement in *Preparing Grain for Flouring:* J. W. Howlett and F. M. Walker, Greensboro, North Carolina, October 16th, 1846. This is for a process of toughening the hulls of grain immediately preparatory to grinding, by passing the same through a current of steam. The patentees say—"the utility of toughening the hulls of grain in some way previous to grinding, and also the difficulty of effecting this desideratum uniformly, is well known to practical millers. When grain is ground in too dry a state, the hulls are so tender and brittle, that a portion of them are pulverized, and pass through the bolt with the flour, disfiguring its appearance, and greatly deteriorating its merchantable value.

Claim.—What we claim as our invention, and desire to secure by letters patent, is the method or process of toughening the hulls of wheat or other grain, preparatory to grinding, by the application of steam, substantially in the manner herein set forth.

Haley Brown, of Brummel's P. O., Davidson Co., N. C., has become the owner of the above patent.

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FEEDING STOCK.—Mr. J. R. HOWARD, Easton, Mass., writes—"A friend of mine says he has made his pork by feeding the swine with two quarts of corn per day for each hundred pounds, live weight, and he would like to learn whether it is proper to assume this or any other stated quantity, as being requisite or proper to feed to other aninals—cattle, horses, poultry, &c.,—that is, what quantity of corn, or other food, should be given for each one hundred pounds of live weight? We should be glad to receive the observations of any persons who have experimented on this subject.

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PECULIAR GROWTH OF VARIETIES.—The peculiar growth of different varieties of fruit trees, as marks for distinctive characters, has long attracted attention. The writings of Duhamel, and the English Pomological Magazine, contain minute descriptions of the growth of the tree, and the appearance of the young wood, buds and leaves, often carried out to great minuteness. Henry W. Beecher, of Indianapolis, in a review, last year, of Downing's work on Fruits, has strongly urged the importance of these characteristics; and later, F. K. Phoenix, of Delavan, Wisconsin, in the last number of the Horticulturist, has dwelt largely on the same subject.

The writer of these remarks, had, many years ago, found the minute descriptions contained in the European works already referred to, of little value, the marks being too indefinite for conveying accurate knowledge by mere words. Hence, in the fifth number of the Cultivator of last year, in some remarks which were made on this point, the untangible nature of these characteristics was distinctly pointed out; and a comparison made with the appearance of the human face—by which every man may be recognized at a glance, although that power of recognition could not possibly in most cases be conveyed by a mere written description. This, the article in the Horticulturist already referred to, designates as "queer doctrine."

The truth is, this was not a fair comparison. For not only may the countenance of a friend be known by the mere *expression* at a moment's glance, but this may be transferred to paper in the form of an outline or portrait, and if accurately done, is scarcely less easily recognized, even though the *color* of the face, and the form, size, and motions of the rest of the body, may be entirely excluded. Would an outline drawing of a particular variety of fruit tree, convey as unequivocal an idea, at a moment's glance? Would a well executed painting of the leaves and branches convey the idea? Not at all—for the Editor of the Horticulturist, in his "remarks" on the above-mentioned communication, says, that the late eminent ROBERT MANNING, who had the most skilful eye he ever knew in distinguishing varieties by the growth, though he knew well the trees on his own grounds, could recognize but few, and those of the most strongly marked sorts, when removed to grounds but a few hundred miles distant, and with a climate and soil different from his own. Others, it is stated, were equally at fault, when removed beyond their own immediate soil and climate; to the truth of all which the writer can add his own similar experience.

If, therefore, the difference between Boston and Newburgh, was sufficient to work such a change in the aspect of most varieties, that the most eminent American pomologist could not recognize them, though with the trees and the whole trees before him, much less could an accurate painting of parts, enable him to do it; and still less a mere outline drawing; to say nothing of the attempt to do it by words only.

These remarks are made with no desire to underrate this useful *auxiliary* to the description of some varieties; and an important aid to accuracy to every nurseryman, who, though he may not easily describe, may usually recognize his young trees by the appearance of their growth. T.

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BENSON'S HYDRAULIC RAM.—I noticed in your January number, the request of Mr. Haywood, with regard to Benson' Hydraulic Ram, to which with pleasure I reply, that when the machine was set up for inspection, in this town, it was made to carry water to the height of seventy-five feet, in much shorter distance than he represents it to be from the spring to his house, with perfect facility. And now, Mr. Werden, on whose premises it was then located, and who has since purchased it, and made it a permanent fixture to his premises, informs us that it raises the water from forty-five to fifty feet in a distance of about eleven rods. Mr. Werden says further, that, although his works were put down late in autumn, and the water carried up this elevation in logs, (which by many were thought to be objectionable if they could be used at all, as more liable to leak,) the concern fully answers his expectation, so that he thinks its utility unquestionable, and the liability to get out of order no greater than that of a common aqueduct. A sufficiency of water is thus elevated to his farm buildings for the supply of a large stock, and for household purposes. In this case the fall is less than six feet. From Mr. Benson's circular we copy the following:—"In one instance, a gentleman having a spring of water in a meadow, 1000 feet from his house, and 85 feet perpendicular depth below it, by the power of a small branch of impure water, that affords five gallons per minute, with a fall of 8 feet, has 730 gallons of pure spring water per day, delivered into a reservoir in his kitchen, by means of this simple apparatus. * * * In another instance, with a stream of water with nine feet fall, the water is elevated to the height of 156 feet."

With regard to the cost of the article, we have been informed that the price of the double ram, or that used for conveying one stream by another, as having a hard water stream carry soft water to the place desired, is, with the right to use, thirty dollars; and that of the single ram, twenty dollars. We believe they are for sale by Mr. Luther Griffing, of this town. From the above statements, Mr. Haywood, or any other gentleman, can gather his own inferences. Our opinion is, that the machine will answer his purpose. However, we would rather have him examine one in operation, and satisfy himself by his own observation. W. BACON. *Richmond, Mass., Feb.* 9, 1847.

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SUFFOLK PIGS.—We have received from WM. STICKNEY, Esq., of Boston, an account of the weights of some swine of various grades of the Suffolk breed. In our Jan. No. we spoke of two pigs we had seen at Mr. S.'s place. In reference to these he says—

"The two hogs you saw at my place in Dec. last, were slaughtered Dec. 9th, and were 16 months 15 days old; were 7-8 Suffolk, 1-8 native. They were not as good as some of the full breed Suffolks. I sold them both in Oct., 1845, and they were kept under a stable on slops and what they obtained from the horse manure, until the last of July, 1846, when I purchased the large one, and kept him on light feed until the first of Oct., when I commenced feeding him. The smaller one I purchased the 1st of Nov., and he had then been fed six weeks. He was sickly when I sold him, and

I think would not have weighed over 30 or 35 lbs. In February I fed with shorts, Indian meal, and a few potatoes and squashes, on which they gained remarkably well. The largest of the two weighed 408 lbs.; his head with the cheeks weighed 18 lbs.; hams 58 lbs.; shoulders 26 lbs.; ribs 48 lbs.; middlings (or clear pork) and leaves (or lard) 258 lbs. The small one weighed 300 lbs.; head 13 lbs.; hams 41 lbs.; shoulders 21 lbs.; ribs 40 lbs."

Mr. Stickney informs us that he has never slaughtered any of his best pigs, not having as yet been able to supply the demand for breeding stock. He sends the following account of the weights of half-blood Suffolks—

"Mr. L. Brooks, of Westminster, Mass., killed two at 7 months and 13 days old, that weighed 273 and 275 lbs. Mr. Howard, of Walpole, N. H., killed one at 13 mos. old, that weighed 378 lbs., another of 12 mos. and 22 days, weighing 369 lbs. Mr. James Titcomb, of the place last named, killed one at 9 mos. weighing 325 lbs.; his neighbor two at 7 mos. and 13 days, weighing 262 and 296 lbs."

Mr. Stickney sends us also a letter from C. Dewolf, of Walpole, N. H., who states that he sold a pig of the Suffolk breed to Mr. McCormick, of that place, which at 7 mos. and 10 days old weighed 325 lbs. Mr. D. adds—

"I sold a pig the same spring to Harvey Stearns, of this town, of the Suffolk blood, which, when six months and ten days old he slaughtered, and it weighed 394 lbs. I sold one to Wm. F. Knapp, of Northampton, Mass., last year; he slaughtered him at 15 months old, and his weight was 515 lbs. I could sell 100 pigs a year of that blood if I had them; they are taking the preference here over all others."

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Agriculture in Delaware.—H. V. L. gives us an encouraging account of the progress of agricultural improvement in this State, which, though small in size, he thinks is "far from being the least in importance." He says: "In a few years New Castle County is destined to become a garden, if the farmers keep up the spirit of emulation which has taken possession of them. In this section of the county we pursue the five course system. 1st year corn, 2d oats, 3d wheat, 4th clover, 5th pasture. I think it the system best adapted to our soil, which is a light loam, with a stiff subsoil of yellow clay. I have been following this plan of culture. The result is favorable so far. I came into possession of this farm five years ago. Then it would not have produced 5 bushels of either corn or oats to the acre. Now it will produce 40 bushels corn, and 45 oats per acre. All this has been done by marling at the rate of 600 bushels shell marl to the acre, and turning under a crop of clover. No manure, or very little, has been put on the land. Marl is found in large quantities in this neighborhood, from 1 foot to 20 feet below the surface of the ground. A bed of shell marl runs all through the northern part of this county, touching the upper part of Maryland, and then into York and Adams counties, Pennsylvania—direction N. W. by S. E. It is not quite as rich in potash and phosphates as the Jersey marl; still it has a large quantity of these substances—enough to justify the farmer to haul it 7 or 8 miles to his land, and to remunerate him well for his toil. It contains a large quantity of lime, which of itself makes it valuable as a manure. This much I can say for it—it is working wonders for us in enriching the soil, and producing heavy crops."

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☞J. P. Mitchell, of Frankfort, Kentucky, in a letter to the Cultivator, says: "My neighbors frequently come to me and inquire, 'Why is it that your crops are twice or thrice as large as mine?' and 'Why is it that your land is getting richer and mine getting poorer?' My universal reply is—'I read the Cultivator.'"

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Virginia Crops.—Extract of a letter dated Lynchburgh, Jan. 18, 1847, from Micajah Davis, Jr., Esq.:—"In this part of Virginia our corn, tobacco, oats, fruit and vegetables, were about an average crop; but the wheat was very short; being greatly injured, in many fields destroyed, by the Hessian fly; and what escaped was much injured by excessively wet weather. Indeed we have had but one good crop of wheat since 1839, and rye, once the surest crop we put in the ground, has for years failed to such an extent that few sow it, and nobody accounts for the change. We have had a few cold mornings—mercury at 6°, 16°, 18°, 20° and 23°, but the weather has been generally very mild, and many more at from 45° to 56°, and on the morning of the 16th 60° at sunrise, and frequently 75° and 76° at noon."

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"Ribbon-Stalk Pea."—Mr. W. H. Hayward, of Salem, N. H., informs us that he cultivates a kind of pea under this name, which he thinks may be the same which has been described in the Cultivator under the name of the "Cluster Pea." Mr. H. says: "This pea grows about 3 feet in height, and is of superior quality for the table. It is a medium bearer, and comes in season with the blue imperial. It is peculiar in the stem, which is flat, and sometimes an inch in width; and in its habit of sending out the pods in one cluster at the head of the stalk." He states that he has sent samples of this pea to the horticulturists in the vicinity of Boston, and kindly offers to send some to us. If left with Messrs. Breck & Co., Boston, they will reach us.

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Heavy Pigs.—Mr. James E. Willis, of Bridgewater, Vermont, gives us an account of the weights of thirteen pigs, of *one litter*, which having been killed at an average age of eight and a half months, gave an average weight of 316 lbs. 7 oz. each, or an aggregate of 4114 lbs. One of them, owned by John S. Haines, of the town mentioned, was killed the day it was nine months old, and weighed 425 lbs; P. Smith, of the same place, killed another at ten months old which weighed 428 lbs. The first of the litter was killed at seven months old, and the last at ten. These weights are more extraordinary than any we have ever before heard of, and we much doubt whether their equal was ever known in the same number of pigs of one litter.

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Hedges and Mules for Illinois.—"A Subscriber," who is about to settle in Illinois, wishes to know what kind of hedges are best adapted to that section—their cost per rod, and the length of time which is required to bring them to a state in which they will be "cattle-proof." He wishes also to know the "average price of mules in Illinois, their yearly expense of keeping, modes of feeding, breaking, &c." Can some of our correspondents answer these inquiries?

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Heaves in Horses.—Joel Funk, Urbana, Ohio, says: "Half a pound gum guiacum, dissolved in whisky, and about a gill given to a horse daily, with his feed, is said to be a good remedy for heaves." He further says: "I have a valuable young horse, that is what our Buckeyes call 'heavy-winded.' When driven fast he breathes hard, but when stopped the difficulty ceases. Can any of your correspondents prescribe a remedy?"

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The quantity of beet sugar made the past year in France has greatly exceeded that of any other year, the amount being 88 million pounds.

AGRICULTURAL SOCIETIES.

NEW-YORK STATE AGRICULTURAL SOCIETY.

Agricultural Rooms, Albany, Feb. 11, 1847.

Present—George Vail, President; J M. Sherwood, ex-President; Wm. Buel, Sam'l Cheever, C. N. Bement, Vice-Presidents; J. M'D. McIntyre, Treas.; B. P. Johnson, Secretary; T. J. Marvin, W. A. Beach, J. T. Blanchard. A. Stevens, Executive Committee; E. P Prentice, Dr. A. Thompson, Wm. H. Sotham.

Mr. Prentice, from the committee on the premium list, reported that the committee had been unable to complete the list in time for this meeting; and the same was recommitted to the committee to report to the Board at their next meeting—and the Secretary was added as a member of the committee.

Letters were read from Hon. Adam Ferguson, Woodhill, Canada West, Geo. Geddes Esq, Fairmount, W. H. Sotham, Albany.

A communication from E. E. M. Gale, M. D., on the cause of abortion in cows, was read, and referred to the committee of publication.

Communications from Hon. Benj. Enos, Madison county, and the President, on the adoption of rules for measuring corn crops, &c., were read and referred to the committee on premium list.

Statement of a crop of oats raised by Hamilton Morrison, was presented and read, and no premium awarded, as the rules required by the Society as to the measurement of the land, and of the crop. had not been observed by the applicant, nor any sample of his grain presented.

On motion of Mr. Stevens, the plan of show grounds at Auburn, was ordered engraved, under direction of Messrs. McIntyre, Tucker, and Stevens.

On motion of Mr. Johnson, the President, Mr. Sherwood, and Mr. Stevens, were appointed a committee to prepare regulations for grain crops.

The Secretary was directed to return the thanks of the Society to P. L. Simmonds, Esq., of London, for his valuable communication to the Society on Grasses, and forward to him the Transactions of the Society for 1844 and 1845.

On motion of Mr. Johnson, vols. 4 and 5 of the Society's Transactions were ordered to be furnished to the N. Y. Historical Society.

On motion of Mr. Stevens,

Resolved, That a set of the Transactions of the Society be furnished to the New-York Agricultural Association.

Messrs. Johnson, Stevens, and Bement were appointed a committee to superintend the preparation and printing of the Transactions of the Society.

On motion of Mr. Stevens,

Resolved, That the show and fair of the Society be held at *Saratoga Springs*, on the 14th, 15th, and 16th of September, 1847, and that the first day be devoted exclusively to the examinations by the committees, and the 2d and 3d days to the exhibition—on condition that the persons who have presented a written guarantee to the board, furnish a bond executed by themselves or others, in exchange for the same, at the next meeting of the board—conditioned that this Society shall not be charged with any of the expenses of the fair at that place.

Messrs. Howard, Bement, and Johnson, were appointed a committee to prepare subjects for the weekly agricultural meetings.

Resolved, That the meeting adjourn to Thursday, the 18th inst., at 11 o'clock, A. M. B. P. JOHNSON, Secretary.

P. S. The premium list of the last year, is left with the Secretary, at the Society's rooms. in the old State Hall, where premiums will be paid in the absence of the Treasurer.

Officers of County Societies who have not forwarded their reports. are requested to do so immediately to the Secretary.

Publishers of papers and others who have business with the Society, are desired to direct their papers and letters to the Secretary, at the Agricultural Rooms, Albany.

B. P. JOHNSON, Secretary.

At the meeting on the 18th, the Premium List for 1847, was completed, and will be published in our next.

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VERMONT COUNTY SOCIETIES.

CHITTENDEN.—At the annual meeting of this Society, the following gentlemen were unanimously elected officers for 1847: *President*, Rev. M. Bingham. Williston; *Vice-Presidents*, C. Smith, St. George: F. Wilson, Hinesburgh. *Secretary*, C. Goodrich, Burlington. *Treasurer*, N Stearns, Williston. *Board of Managers*, Henry B. Stacy, Burlington; Thomas H. Canfield, Williston; Orville N. Clark, Milton; Heman H. Newell, Charlotte; Daniel Patrick, Hinesburgh; Geo. Saxton, Shelburne; Orville Shaw, Jericho; Lemuel B. Platt, Colchester; Henry Stanton, Essex; Timothy Sibley, Westford; Levi Whitcomb, Richmond; Samuel Wells, Underhill; John Snyder Huntington; Nathan Lockwood, St. George; Moses Colton, Bolton.

Subsequently the Managers met and made out a Premium List, for 1847, amounting to over $600.

RANKLIN.—The annual meeting of the Society for this y, was held at St. Albans, on the 19th of January, when the ing officers were elected: Benj. B. Newton, *Pres't.* Philo England and Bradley Soule, *V. Pres'ts.* A. M. Huntington, *Treas.* M. F. Palmer, St. Albans, *Sec'y;* and a Board of Managers, consisting of one from each town in the county.

WINDSOR.—The annual meeting of the Society for this county, was held at Woodstock, on the 13th of January, when the following officers were elected for the present year: John Porter, Esq, of Hartford, *President*. Joseph W. Colburn, Esq., of Springfield, and Solon Danforth, Esq., of Barnard, *Vice-Presidents*. Charles Marsh. Jr., of Woodstock, *Sec'y*. Norman Williams, Woodstock, *Cor. Sec'y*. Eliakim Johnson, of Woodstock, *Treasurer*. A Board of Managers, consisting of one or more persons in each town, was also appointed. The Treasurer reported the receipt of $605.45—Payments,$303 63, leaving a balance of $302.82 in the Treasury.

ADDISON.—At the annual meeting, held at Middlebury, on the 27th Jan., the following officers were elected: Hon. Silas H. Jenison, *President*. Elias Bottom and David Hazard, Esq., *Vice-Presidents*. Elijah W. Blaisdell, Jr., *Sec'y*. Julius A. Beckwith, Esq., *Assis't. Sec'y*. Harrry Goodrich, *Treasurer*. A Board of Managers, consisting of one from each town, was appointed.

RUTLAND.—The annual meeting was held at Rutland, on the 6th Jan., when the following officers were elected:—Hon. Frederick Button. of Clarendon, *President;* W. L. Farnum, Esq., of Poultney, and W. R. Sandford, Esq., of Orwell, *Vice-Presidents;* J. C. Thrall, of Rutland, *Rec. Sec'y;* Samuel H. Kellogg, Esq., of Pittsford, *Auditor;* Hon. W. C. Kittridge, of Fairhaven. *Cor. Sec'y*. Also a Board of Managers, consisting of one from each town in the county.

☞ For notice of Premium Crops of these Societies, see article on "Crops of Vermont," in another part of this paper.

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CONNECTICUT COUNTY AG. SOCIETIES.

HARTFORD.—At the annual meeting of the Hartford Co. Ag. Society, held at Hartford, Nov. 4, 1846. the following persons were appointed officers for the year ensuing:—D. W. Grant, of Bloomfield, *President;* Egbert Cowles, of Farmington, and Norman Porter, of Berlin. *Vice-Presidents;* Francis Gillette, of Bloomfield, *Cor. Sec'y;* F. A. Brown. of Hartford, *Rec. Sec'y;* A. W. Butler, of Hartford, *Treas.*; Julius Catlin, of Hartford, *Auditor*.

At the same time, the usual Committees for awarding Premiums for the year, and Town Committees of three in each town, were appointed.

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NEW-YORK COUNTY SOCIETIES.

WAYNE.—At the annual meeting, Jan. 9th, the following officers were chosen for 1847:—*President*, Reuben H. Foster, Lyons; *VicePresidents*, Joseph Watson, Galen; Joel Hall, Marion; James H. Ferris, Butler; Wm. P. Nottingham, Palmyra; Henry Shaver, Jr., Arcadia; Jedediah Wilder, Huron; W. D. Cook, Sodus. *Rec. Secretary*, E. N Thomas, Rose. *Cor. Secretary*, J. J. Thomas, Macedon. *Treasurer*, G. H. Dickerson, Lyons. *Executive Committee*, Samuel E. Hudson, Palmyra; Truman Hemingway, Palmyra; Wm. R. Smith, Macedon; Aaron Griswold, Galen; A. G. Percey, Lyons; Elizur Flint, Rose.

CHAUTAUQUE.—At the winter meeting of this Society, the following premiums were awarded:—

Indian Corn.—1. To Jabez Burrows, of Chautauque, 114 bushels per acre—2. To Melchert Thumb, of Ellery, 98 bu. 27 lbs.—3. To Elam C. Bliss, Westfield, 78 bushels.

Wheat.—1. To Geo. Hull, Westfield, 39 bu. 26 lbs. per acre—2. To Timothy Judson, Portland, 34 bu. 50½ lbs.—3d. To Elam C. Bliss, 29 bu. 2 lbs.

Spring Wheat.—2d prize to E. C. Bliss. 25 bu. 29 lbs. per acre. To the same, 2d premium for *Barley*—1st for *Flax*.

Carrots.—1. To E. C. Bliss, 194½ bu. on one-eighth of an acre—2. To W. & L. Risley, of Promfret, 162 bu. on one-eighth of an acre.

Potatoes.—1. To Lemuel Cottrell, of Chatauque, 154 bushels on half-acre—2. To E. C. Bliss, 131 bu. [The list of officers for this year we have not seen.]

GREENE.—Officers for 1847:—*President*, Hon. Zadock Pratt, Prattsville; *Vice-Presidents*, Uriah Stevens, George Beach, J. T. Cook, C. L. Kierstead, and Stewart Austin; *Rec Secretary*, H L. Day; *Cor. Secretary*, R. Van Dyke; *Treasurer*, Stephen Hotchkiss; *Ex. Committee*, John McGiffert, of Athens; Morris Hallock, of Coxsackie; Joel Wickes, of Cairo; William Newkirk, of Catskill; Cyrus Field, of Durham; George Budd, of Greenville; Marcus Beach, of Hunter, Isaac B. Hinman, of Lexington; Anthony Van Bergen, New Baltimore; Henry Larraway, Prattsville; James Robinson, Jr., of Windham.

OSWEGO.—The seventh annual meeting of the Oswego Co. Ag. Society was held on the 6th Jan., at Mexico, when the following officers for the ensuing year, were appointed, viz:—Bradley Higgins, of Richland, *President;* Samuel Foot, Phœnix. and John Baker, Parish, *Vice-Pres'ts.;* I. W. Tiffany, Mexico. *Treas'r.;* E. C. Mitchell. *Rec. Sec'y.;* Joseph E. Bloomfield, Mexico. *Cor. Sec'y;* John Woodbury, Richland; A. Herbert, Mexico; and Levi Matthews, Mexico, *Ex. Committee;* H. L. R. Sanford, Fulton; G. L. Sherwood, Richland; and J. N. Dewey, *Com. on Printing*.

The next fair is to be held at Mexico, on the 29th and 30th days of Sept. next."

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received, since our last, from J. M., J. Grimsha, Gulielmus, Benj. Leas, Wm. R. Prince, Wm. Bacon, Young Farmer, Prof. John P. Norton, John Wilkinson, John Pettibone, F. G. Ruffin, A Subscriber, T. H., W. H. Hayward, Wm. Bacon, J. F. J., H. V. L., H., Passenger, H., Ann, J. F., Geo. Vail, Paul Davidson, J. Townsend, A Subscriber, B. M. J., T. H. Collins, A. C., L., J. F. Allen, A Cayuga Wool Grower, X. Y. Z., Subscriber, E. V. W. Dox, Za. Drummond, S. E. Todd, A. F., J. Sherman, D. E. Gardner.

Books, Pamphlets, &c., received last month, as follows:—First Annual Report of the Ohio State Board of Agriculture, for 1846, from M. B. Bateham, Ed. Ohio Cultivator, and E. G. Squier, Esq.——Catalogue of the Officers and Students of the Western Reserve College, Hudson, Ohio.——Address before the Tompkins Co. Ag. Society, by B. G. Ferris, Esq.——Catalogue of the Astoria Nursery, by L. Prevost.——Catalogue of Lafayette College, Easton, Pa., from H. W. Crosby.——The Horse's Foot, and how to keep it sound, with illustrations. By Wm. Miles, Esq., New-York. Published by Appleton & Co.——The American Poulterer's Companion, by C. N. Bement; fifth edition. Published by Harper & Brothers.——The Battle of Life, a love story, by Charles Dickens, (Boz.) Philadelphia, Lea & Blanchard. Price, 6¼ cts.——First and Second Geological Reports of Vermont, from the publisher, C. Goodrich, Burlington.——Report of the Massachusetts State Lunatic Hospital, from Dr. Geo. Chandler, Superintendent.——Laws and Regulations of Franklin College, Tenn.

Prof. E. N. Horsford.—Our readers have been made acquainted with this gentleman through his interesting and valuable correspondence with the Cultivator, during a residence of two years in Germany, where he has been ardently and assiduously engaged in chemical investigations under the direction of Baron Von Liebig. Prof. H. has been eminently successful in his scientific labors, and leaves the Giessen Laboratory with the highest recommendations of the great teacher of that world-renowned Institution; and we are happy to add, as good evidence that his excellent qualifications are duly appreciated by his countrymen, that he has lately been appointed to the Rumford Professorship in Harvard University, at Cambridge, Massachusetts. We understand that arrangements have been made by which Prof. H. will devote himself principally to original investigations in chemical science, in which he has already shown that he is capable of accomplishing important results. One or two of his elaborate papers have appeared in the Cultivator, and his "Chemical Essays," giving the results of his analyses of "Grains and Vegetables," "*for the purpose of estimating their separate values for nutrition*," which have been published in a separate form, both in the German and English language, are of great interest and value to every class in the community.

Kiln-Drying Indian Corn and other Grain.—Will some one have the goodness to furnish us with a description of the process of kiln-drying grain, especially Indian corn, with a statement of the expense?

Railroads.—We have received from a correspondent at Lyme, N. H., a sensible and well-written article on the subject of Railroads, and the advantages which he believes will accrue to that section from the proposed Boston and Vermont road. We have no doubt that these advantages are fully as great as represented, but as the matter is somewhat irrelevant to our object, we cannot consistently publish the article, especially as its insertion would necessarily exclude other communications.

Timothy Hay.—In a late conversation with Mr. John Hammond, of Worcester, Mass., he observed that he had rather have good "swale or bog hay," cut green and well made for his cows, (of which he keeps a pretty large herd) than common timothy, or, as it is called in New England, "herds-grass" hay. This conclusion was the result of his own observation and experience, and we found the same idea was held by many farmers in that section. Like opinions are also entertained in other parts of the country, as may be seen by examination of the Cultivator for 1844, pp. 45, 140.

Lambs Born Dead.—"A Young Farmer," of Geneseo, informs us that he had in the winter of 1845–6, 200 ewes, which had been selected for the purpose of raising lambs. "About the 20th of March," he says, "they commenced dropping their lambs perfectly dead, it being one month before their time. They continued in this manner until the 20th of April, the proper time for the lambs, when I found that I had lost 100. All that came after that time were alive and apparently healthy. The sheep were fed nothing but *plenty* of good hay, and were well littered with wheat straw the fore part of the winter, and oat straw the latter part." Can any one give the reason for the abortion?

Dutchess Agricultural Institute.—We are requested to state that the summer session o this institution will commence on the first Thursday of April next. The particulars in reference to the course of instruction here pursued, may be found by reference to an advertisement published in the last volume of the Cultivator, page 326. The Principal of the Institution in an article intended for our columns, but which is crowded out by a great pressure of other matters, observes: "Believing that we have given perfect satisfaction to our patrons, we respectfully solicit a continuation of their support, which we hope to merit by furnishing adequate means to our pupils for the acquirement of valuable knowledge."

Durham Cattle.—G. V. Sackett, Esq., of Seneca Falls, lately killed a Durham cow, four years old, which weighed 1009 lbs., of which the four quarters were 848 lbs. She had brought two calves, one of which was dropped only five or six months before she was killed. A few years since Mr. Sackett killed the Durham cow Sylvia, (bred by C. N. Bement, Am. Herd-book, p. 110.) She had been an uncommon cow for the dairy—having produced 16 lbs. of butter per week, and was never dry from the time she dropped her first calf, at three years old, till a few months before she was killed, when she was eleven, yet she weighed 1184 lbs.

Hall's Brick Machine.—This machine was invented by Mr. Alfred Hall, of Perth Amboy, New Jersey, (late of Coxsackie, N. Y.) and has been patented in the United States and Great Britain. It is considered, by those acquainted with brick-making, superior to any other machine yet used for this purpose. It received the highest premium awarded by the American Institute for brick-making machinery, in 1844. We notice by the English papers that it was exhibited at the show of the Smithfield Club, London, in December last. In relation to its construction and operation, it is observed—"It consists of a pug-mill upon an improved principle, to which the moulding apparatus is so attached that the clay, after passing through it, is forced immediately into a series of moulds prepared to receive it. The bricks made by this machine are much sounder than those made by hand, and with the power of one horse and two men, [with two boys carrying off] from 6,000 to 10,000 of brick can be produced in a day."

Weekly Agricultural Meetings.—The use of the Assembly Room having been granted to the Agricultural Society for the purpose of holding evening meetings for the discussion of Agricultural subjects, the meetings have been commenced, though only two have yet been held, at which "Plowing," formed the subject for discussion. A report of the discussion has been published in the daily papers of the city; but we are obliged to omit its insertion in our columns in consequence of the great press of communications from our correspondents. We shall endeavor, however, to furnish an abstract of the discussions in our April number.

Farmer's Club.—The citizens of Stockbridge, Mass., have formed a society under the name of "Farmers' Association of North Stockbridge." The members agree to meet at each others' houses, every fortnight, in the winter season, "for the mutual interchange of knowledge." Each member pledges himself to make some experiment in farming in the course of the season, and make an accurate report to the association at the end of harvest, of the details and results, that the knowledge thus gained by one may become useful to all. We are informed that "the meetings have been regularly held and generally attended. The association at first consisted of six or eight members. It has increased in interest and now has twenty-three members. They are satisfied that they have by their meetings added much to the amount of social pleasure, and something to their stock of profitable knowledge." The association proposes to raise by subscription a fund of at least $500, to be given in premiums of different amounts, from $20 to $150, for the best varieties of choice fruit trees, from twelve to seventy-five in number, that shall be planted after the formation of the society. The association have appointed Daniel D. Kendall, H. W. Bishop, H. H. Cook, John Hotchkin, Oliver Dewey, and Charles Sedgwick, a committee to solicit subscriptions, and have appointed John Hotchkin, Treasurer. We spoke, in the February number, of the advantages of Farmers' Clubs, and we are glad to hear that the people in various sections are taking measures to form them.

Death of Distinguished Friends of Agriculture in England.—Sir Charles Morgan died at his residence, Tregedar, in Wales, on the 5th of December, aged 86. He was a most beneficent patron of agriculture, and had for many years held an annual agricultural show on his own estate, open to general competition, and as we have been lately informed by our countryman, Mr. Colman, had himself given more than twenty-five thousand dollars in premiums. Mr. C. mentions having attended the two last of this gentleman's shows, and says he witnessed "the grateful enthusiasm with which this agricultural patriarch was received among his attached neighbors and friends."

Wm. Youatt, Esq., died in London on the 9th of January, aged 70. Mr. Y. was a veterinary surgeon of the highest distinction, and was well known both in Europe and the United States as the author of the works entitled, "The Horse," "The Sheep," and the "Ox," published by the Society for the Diffusion of Useful Knowledge. He was also the author of a highly popular and useful work lately re-published in this country on the "Dog." The *Mark-Lane Express* says—"He was a proprietor and joint editor of 'The Veterinarian,' the first periodical publication exclusively devoted to veterinary matters; had he lived a few days longer he would have witnessed the publication of his last work, 'The history of the Pig,' on which for some years he has been engaged, and which will be published in a few days, thus completing his series of Domestic Animals."

Price of Guernon's Treatise on Milch Cows.—In the advertisement of this work, published in our last number, it was said, "THREE copies for $4." It should have been *one dollar*. The price of the book is 37½ cents for single copies, and *three* copies for one dollar. It can be had at most of the cheap publication offices in the country, or it can be obtained of the publishers, Greeley & McElrath, Tribune Office, New-York, who will send three copies by mail for $1.

ANSWERS TO INQUIRIES

Kendall's Churn.—Machine for Cutting Meat.—Grant's Fanning Mill.—J. W., (St. Stephens, Ala.) Kendall's churn is of cylindrical form, and the churning is performed by a shaft with arms, attached to a crank. There are five sizes; number one is seven inches by twelve, in the clear; and the other sizes are regularly larger; each being one inch in diameter and one inch in length larger than the size next smaller. The prices are 2, 2½, 3¼, 4, and 4½ dollars. Wiltsie's sausage cutter is a good machine, and with one man will cut 100 pounds of meat in an hour, ready to be made into sausages. The price is $15. It is about one foot square. Grant's fanning mill is considered the best in use. There are four sizes—the prices, 21, 23, 25, and 27 dollars.

Black-Leg in Cattle.—M. B. F., (New Britain, Ct.) We have but little doubt that the disease you mention is the black-leg. The best preventive is believed to be regular and good feeding. In an essay on the management of stock, which received a prize from the Highland Society of Scotland, it is statod that a liberal allowance of turneps with a pound of oil-cake to each calf, had been found a specific against this disease. The great object is is to keep up a healthy circulation of the blood, and this may be in a great measure accomplished by the use of excellent food, aided if necessary by cathartic medicines. In cases where animals are already attacked, it is recommended to divide the large vein in each foot, with a knife, just above where it branches off to the hoof. A tea-spoonful of saltpetre, given to the animal every other day, is said to have been found useful.

Ice-Houses and Smoke-Houses.—J. H. C., (New Albany, Ind.) It is too late to give a plan of an ice-house for this season. We would refer you to the December number of the *Horticulturist*. As to smoke-houses, we should prefer building them with brick or stone.

Oil for Painting Outside of Buildings.—J. F., (Venice, N. Y.) Boiled oil is preferred to raw, where the paint is to be exposed to the weather.

Italian Rye Grass.—J. W., (Dutchess Ag. Inst.) We have tried this grass to some extent; but except for early pasture we cannot say that it has any particular advantages over the kinds in common cultivation.

Curing Corn Fodder.—F. G. R., (Charlottsville, Va.) Corn fodder, cut green, requires a great deal of drying, (much more than clover or timothy,) and there sometimes comes a season in which it is almost impossible to cure it. The best way which we have practiced, is to cut the corn with a cradle or "corn-cutter," as soon as it is out of blossom; let it lie on the ground a day or two till it is dried on the outside; then tie it in small bundles as near the top as possible, and put it in small shocks, leaving the bottoms open to admit the air, and binding the shocks close to the top. If winds upset the shocks, they should be re-set, and they should remain out till the fodder is perfectly dried, when it may be put either in barns or stacks.

Hornless Calf.—G. K. P., (Wadsworth O.) We are inclined to think that the want of horns in your calf, is attributable to the blood of some hornless breed, which now "crops out," though it may not have appeared in the immediate progenitors. We have known this peculiarity to appear, after it had remained undeveloped for several generations. It is possible, however, that it may be as you suggest, an "accidental circumstance;" if so, like other traits of similar origin, it may be to some extent transmissible to offspring.

Hay Presses.—D. H., (New Albany, Ind.) There are hay presses in operation which are thought preferable to those worked by a screw. Of these, Van Hosen's press, spoken of in the Cultivator vol. ix., p. 66, and Dedrick's in vol. x., p. 172, are considered superior. The price is from $100 to $120. L. Dedrick, Kinderhook, and W. S. Jacks, Catskill, are the manufacturers.

Heifer.—"A Subscriber," (Lewisburg, Penn.) Without a personal examination of your animal, or more definite knowledge in relation to her, it is impossible to say what is the cause of her failing to give as much milk with her second calf as she did with her first. As she is, from your description, a fine animal in appearance, we should advise keeping her another year, when she may do better.

Drill-Barrows, Rollers, &c.—B. L., (Shirleysburg, Pa.) Planting machines, or drill-barrows, to do what you require, will cost here from $12 to $15. Rollers should be made in two or more parts. The whole length may be from five to seven feet long. If of cast iron, the longest should be in four parts, and the shortest in two. If made of wood, six feet in two parts is the usual length. [See an article on the roller in last vol. p. 111.]

NOTICES OF NEW PUBLICATIONS.

The Horse's Foot, and How to Keep it Sound; by William Miles. Re-published from the third London edition, by D. Appleton & Co., New-York. 12mo. pp. 70. Price, 25 cents.

The importance of soundness in the horse's foot is so well known to all who have had any experience with that animal, that the expression "*no foot no horse*," has become a saying. The little work before us, is evidently written by one who understands the subject and is capable of imparting useful knowledge to others. It is very handsomely "got up," and is illustrated with good cuts, showing the anatomy of the horse's foot, modes of shoeing, &c.

First and Second Annual Reports on the Geology of the State of Vermont. By Prof. C. B. Adams, State Geologist. Burlington, C. Goodrich. 8vo., pp. 360. Price 75 cents.

The geological survey of this State was commenced we believe in 1844, by Prof. C. B. Adams, of Middlebury College. We are indebted to the publisher, Mr. Goodrich, for copies of the first and second reports. A glance at the subject matter shows that the State has been found rich in internal resources, especially in iron, and rocks valuable in the arts. These, with the means which the people will soon enjoy in the facilities of railroad communication, will, without doubt, give increased wealth and prosperity to the State. A few copies of these Reports have been left at the Cultivator Office for sale.

The Child's First Book of Reading and Drawing. By Jerome B. Howard, Teacher of Drawing in the New York State Normal School.

This book is a combination of the Verbal and Phonic methods which are adopted by many of the best teachers of our country. The design of the author is to teach the child to read *at once*, without spending his time with the uninteresting and unmeaning *a b ab's*. The *Verbal Combinations* are designed and well calculated to remedy the vile habit of reading with that monotonous, *drawling* tone, which every teacher knows is so hard to cure. The book is also intended to teach Drawing, there being connected with it a system of Drawing lessons, with directions enabling the teacher, though himself unable to draw, to successfully direct the child. We consider this a very useful and important part of the work. Educationists are beginning to see the importance of having Drawing taught in our common schools. The plan of the book, though entirely new, appears to us very judicious, and it has been already introduced with success into many of our schools, and bids fair to become very popular. Its author has had considerable experience as a teacher, and we have repeatedly witnessed the rapid progress of schools under his direction.

A Brief Compend of American Agriculture. By R. L. Allen. New-York, Saxton & Miles. 12mo., pp. 438. Price $1.

An advertisement of this work will be found in this number, to which we would call attention. We gave a favorable notice of it in our November No. of last year. A further examination of the book has confirmed the opinion then expressed. A cotemporary in noticing it, observes—"We think, therefore, that Mr. Allen's volume, the basis of which is good practical farming, as practiced by the best cultivators in the United States —with an intelligent reference to those principles of science which lie at the root of all successful practice, is likely to be of much more real service to us than any work on agriculture yet issued from the press, and we gladly commend it to the perusal of every one of our readers engaged in the cultivation of the land."

The American Poulterer's Companion: a practical treatise on the breeding, rearing, fattening, and general management of the various species of domestic poultry, with illustrations, and portraits of fowls taken from life. By C. N. Bement. Fifth edition. New-York, Harper & Brothers, publishers, 82 Cliff st. pp. 380. 12mo.

The fifth edition of this work, from the press of the Messrs. Harpers, New-York, is before us. As a work of practical value, it is beyond all question superior to any other of the kind before published in this country; and the favor with which it has been received by the public is shown by the rapidity with which it has passed through the four previous editions. We are happy to see that the present edition embraces some improvements over the previous ones—particularly in the quality of paper, clearness of type, and the arrangement and appearance of the illustrations. We presume the work will continue to meet with a ready sale.

The Prairie Farmer; devoted to Western Agriculture, Mechanics and Education. Chicago, J. S. Wright and J. A. Wight, editors. Monthly, 32 pp., 8vo. $1 a year.

We can heartily recommend this paper to our western friends especially, and to all who wish a well conducted paper of the kind. All those who contemplate a removal to the west, should take it, as it will afford them information which cannot fail to be of great service, both before and after their removal.

The Farmer and Mechanic; devoted to Agriculture, Mechanics, Manufactures, Sciences and the Arts. New-York, published by Wm. H. Starr. Quarto, weekly, $2 a year.

This publication, of which we have before made favorable mention, commenced its present volume in January last, in the quarto form, and with greatly improved appearance. Much spirit and ability are displayed in its management, and it is certainly a valuable publication. We are happy to learn that it is well patronized by the class for whom it is designed, and who are no doubt sensible of the benefits to be derived from such a medium of communication.

American Journal of Agriculture and Science. Conducted by Dr. E. Emmons and A. Osborne. New-York, Huntington & Savage. 8vo., pp. 64. Monthly, $2 a year.

This work, which, at the commencement of the present year, was changed from a quarterly to a monthly, is devoted to the dissemination of useful knowledge, relating to science, the arts and agriculture, and the promotion of sound views in education. It is ably edited, and should have a wide circulation.

Eureka, or the Journal of the National Association of Inventors; devoted to the Discoveries of Science and Invention in the Arts. New-York, published by Wm. H. Starr. Monthly, quarto, at $1 a year.

The Eureka is neatly printed, and makes a good appearance. It publishes monthly lists of patents issued from the United States Patent Office, and gives the earliest notice of all new inventions, with diagrams and illustrations of the articles to which they refer—comprising altogether much valuable information.

The Farmer's Agricultural Chemistry; compiled from the best authors; by M. M. Rodgers, M. D.; adapted to the use of common schools. G. H. Derby & Co., Geneva, N. Y.

This is a small manual relating chiefly to chemistry, botany, and mineralogy, compiled principally from the writings of Liebig, Thaer, Petzholdt, Johnston, and Chaptal. An appendix is added, embracing brief remarks on tillage—insects, and modes of avoiding their ravages—weeds, and modes of extirpating them—and grafting, by different modes. We have not examined it minutely, but observe that the various subjects are treated in a plain manner, and we cannot doubt that the book contains valuable matter for the class for which it is designed.

The Medico-Chirurgical Review, and Journal of Practical Medicine. London, Quarterly. Re-published in New-York by R. & G. S. Wood. $5 a year.

This is unquestionably one of the most valuable medical journals published in the world. It is conducted by several of the most able physicians in London, and furnishes a vast amount of information on every subject connected with the practice of medicine.

COLMAN'S EUROPEAN AGRICULTURE, Part VIII.—This is one of the most interesting numbers of this excellent work which has yet appeared. We had intended to give a pretty full view of its contents in this number, and have a long article in type, which we have been obliged to postpone. An article on the "Cultivation of Hops," derived chiefly from the part under consideration, will be found in another part of our present number.

FAT MEAT.

AT the Centre Market in this city, on the 22d of February, there was a fine show of fat meat. We noticed the following:—

BEEF.—E. KIRKPATRICK had the carcass of a five year old ox, said to have been a cross of Durham and common stock, bred by N. C. SWEET, of Clifton Park, Saratoga county, weighing, 4 quarters, 1,570, hide, 113, tallow 203 = 1,885 lbs. The quality of the beef was very fine.

D. MAHONEY had the carcass of a spayed heifer, four years old, a grade Durham, bred by F. ROTCH, of Butternutts, Otsego county, weighing, 4 quarters, 1,200, hide 100, tallow 150 = 1,450 lbs. For weight in proportion to bone, this animal was most extraordinary.

P. & J. FREDENRICH and J. MCQUADE had the carcasses of three pair of cattle fatted by WM. CHAMPLIN, of Sherburne, Chenango Co., which weighed as follows: two six year old oxen, 3,600; two do. five years old, 3,000; two do. four years old, 2,900.

PORK.—GEO. SCHWARTZ had three large hogs. Two of them were fattened by Mr. WOOLFORD, of this city. They were a cross of the Cheshire, and were two years old. The barrow weighed 718 lbs.; the sow, which reared a litter of pigs last summer, weighed 524 lbs. The other was a Berkshire hog about two years old, which weighed 516 lbs.

MUTTON.—E. KIRKPATRICK had the carcases of 13 South Down wethers, bred by F. ROTCH, Butternuts, Otsego county, from one year and a half to two years old, which weighed from 63 lbs. to 97 lbs. each. They were of very fine quality.

H. FEATHERLY had the carcasses of six sheep, fattened by N. JENKINS, of Glen, Montgomery county, weighing from 106 to 128 lbs. They were chiefly of Leicester or Bakewell breed, and of superior appearance.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Feb. 18, 1847

FLOUR—Genesee, per bbl, $7.25.

GRAIN—Wheat, per bushel, $1.61a$1 75—Rye, 95c.—Barley, 82—Oats, 48a50—Corn, Northern and Jersey, 97a100.

BUTTER—Orange County, per lb., 22c.—Western dairy, 14c.—Ohio, 12½c.

CHEESE—Best shipping, per lb., 6½a7¾c.

BEEF—Mess, per bbl., $12—Prime, $9a$9.50.

PORK—Mess, per bbl., $15—Prime, $11.75a$13.

HAMS—Smoked, per lb., 7½a9 cts.

LARD—Per lb. (new) 10c.

HEMP—Russia, clean, per ton, $215—American, dew-rotted, $115.

HOPS—Per lb., first sort, 9a11c.

TOBACCO—Connecticut, per lb., 10a11c—Kentucky, [illegible]a4c.

SEEDS—Flax, per bushel, $1.25a$1.30—Clover, per lb., 6½c.—Timothy, (herds-grass,) per bu., $2.50.

COTTON—New Orleans and Alabama per lb., 10½a14½c.—Upland and Florida, 10½a12½c.

WOOL—(Boston prices.) Feb 19:

Prime or Saxon fleeces, washed per lb.	40a45 cts.
American full blood fleeces, ...	33a38 "
" three-fourths blood fleeces, ...	30a33 "
" half blood do	28a30 "
" one-fourth blood and common, ...	25a28 "

REMARKS.—The exports of flour from New-York, from the first to the sixteenth of February, were 95,437 barrels. The exports of grain for the same period, were 449,850 bushels corn; 93,959 do. wheat; 37.588 do. rye; 18,894 do. barley; 2,010 do. oats. The export of provisions for the same period were 2,101 bbls. beef; 1,211 do. pork; 4,298 kegs lard. Beef is rather dull, and there is not as much briskness in the grain market as prevailed a few days since—all seem waiting for the English steamer which at this date had not arrived at Boston.

POSTSCRIPT.—Since the above was written the Cambria has arrived at Boston, bringing news from England to the 4th of February. There has been a considerable decline in breadstuffs, but the provision market was firm. The decline in wheat is 4s. to 5s. per quarter; Indian corn 4s. per quarter; flour 4s. (about one dollar) per barrel. The demand for American lard, beef, pork, and cheese, was good, and prices were well supported. Prices of cotton and woolen fabrics were very irregular. The news, however, seems to have but little effect on the New-York market. Flour in that city on the 23d of Feb, was steady at $7 for Genesee, and $6.87½ for Michigan. Corn was brisk at 95c. to 100c.—sales 60,000 to 70,000 bushels. Provision market remained without much change.

LIVE STOCK MARKET.

Brighton, Mass., Monday, Feb. 15.

At market 550 Beef Cattle, 13 yokes of working Oxen, 32 Cows and Calves, 1700 Sheep and about 72 swine.

BEEF CATTLE.—Extra at $6.50—first quality, $6—second quality, $5.25 @ $5.50.

WORKING OXEN—Sales were made at $74, 78, and 92.

COWS AND CALVES.—Sales were made at $21, 24, 29, and $34.

SHEEP.—Sales were made at the following prices:—$1.63, 1.67, 2.13, 3.12, 3.75, 5.25, and $6.

SWINE.—Sales were not noticed, there being but few at market.

N. B. There being a large supply of Beeves at market, prices were hardly sustained, and a large number remain unsold at the close of the market.—[Traveller.]

PRICES OF WOOL, in Western New-York, for the last eleven years:

1835,	average price	35	cents per	pound.
1836,	do	36	do	do
1837,	do	37	do	do
1838,	do	35½	do	do
1839,	do	47½	do	do
1840,	do	33	do	do
1841,	do	36½	do	do
1842,	do	30½	do	do
1843,	do	28	do	do
1844,	do	39½	do	do
1845,	do	29½	do	do
1846,	do	24	do	do

Preservation of Hams.—As soon as the ham is taken from the brine, and while yet wet, dust the flesh part with finely ground black pepper. This renders it so repulsive to the flies that they will not deposit their eggs. An experienced farmer stated some years ago, that he preserved his bacon from the attacks of the fly, by burning a small quantity of red pepper on the fire used for smoking.

BOX FOR EDGINGS.

ONE Thousand yards Box Edgings, for sale at a low rate. Apply at the Agricultural Warehouse, No 10 Green-st , Albany.

March 1—2t. LUTHER TUCKER.

FRUIT TREES FOR SALE.

THE subscriber respectfully informs the public that he still continues the Nursery business, about one mile north of the Steamboat Landing, in the Village of Newburgh, and directly opposite (East) of the Powellton House.

All orders (post-paid) punctually attended to.

March 1—2t CHAS. DOWNING.

HIGHLAND NURSERIES.

NOTICE.—A. J. Downing having retired from the Nursery business heretofore conducted at Newburgh under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which these Nurseries have had, for a long time, but, as the present stock is gradually drawn from Mr. D.'s grounds, they will greatly enlarge the Nurseries, and endeavor fully to meet the constantly increasing demand for the trees grown here.

Orders addressed to the subscribers *post-paid* will receive prompt attention, and all trees, shrubs, plants, &c., will be carefully packed and shipped to any part of the Union. A. SAUL & CO.

Highland Nurseries, Newburgh, Feb. 15, 1847.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. Saul, who has been at the head of this department here for the last eight years, and his accuracy and fidelity in the propagation of fruits and general care of the Nurseries, during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted.

A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15, 1847. Mar-1t

COMMERCIAL GARDEN AND NURSERY, OF PARSONS & Co.

Flushing, near New-York.

THE proprietors of this establishment are constantly increasing their stock, which now covers nearly seventy acres of ground, and includes every desirable variety of Fruit and Ornamental Trees, Shrubs, Roses, Vines, &c. Their possession of specimen grounds for the testing of every variety of fruit they cultivate, affords them increased facilities for the attainment of correctness. They would also call attention to their large assortment of Foreign Grapes, some seventy varieties of which they are fruiting under glass.

To venders, and those who purchase in large quantities, liberal discounts will be made. Catalogues can be obtained gratis of PARSONS & LAWRENCE, 10 Pine st.; of A. B. ALLEN, 187 Water st., New-York, or of the proprietors by mail.

March 1, 1847—2t.

SEED POTATOS FOR SALE.

A FEW hundred bushels of Hall's Early June Potatoes. This variety after a cultivation of four years, has proved, when planted early, unaffected by the potato disease. It is the best early potato raised for market, grows large, produces a fine crop, and is an excellent potato for fall and winter use. Several persons who applied last year through Comstock & Co., and were not supplied, have the preference this year by an early application. Orders may be addressed to the subscriber, or left at the Agricultural Warehouse of Luther Tucker.

March 1—2t. WILLIAM HALL.

PLOWS! PLOWS!!

THE attention of Farmers and Dealers is particularly invited to our assortment of Farming Tools—among which may be found a complete assortment of the most approved as well as common plows, including all sizes of the Center Draft, Side-Hill, Subsoil, Self-Sharpening Plows, from Messrs. Prouty & Mears, of Boston. Also, the Eagle, Subsoil, Side-Hill, Self-Sharpening, and others, from Messrs. Ruggles, Nourse & Mason, of Worcester, Mass. Also, the Peekskill Plow, all sizes, from Minor & Horton, of Peekskill, N. Y., and Delano's Diamond Plow—all for sale at the manufacturers' home prices, and warranted. The adjustable Steel Point Self-Sharpening Plows, from the factory of Messrs. Ruggles, Nourse & Mason, is just received. This is a new improvement in the wearing parts of the plow, and has several advantages over the common plows in use. (See R. & N.'s advertisement.) Also on hand Cultivators, Harrows, Seed-Sowers, and Planters, Ox-Shovels or Scrapers, Field Rollers, &c., &c., &c., at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany, N. Y. L. TUCKER.

ALBANY SEED STORE,

No. 10 Green-Street.

THE subscriber has now on hand at the above establishment, a general assortment of FIELD, GARDEN, and FLOWER SEEDS, warranted of the best quality, and which will be sold at as low rates as at any place in the country. Among the assortment, are the following:

GRASS SEEDS.—Timothy, Orchard, Red Top, Western, and Northern Clover, &c., &c.

SPRING GRAINS.—Black Sea Wheat, Rye, Barley, Buckwheat, Millet, Peas, Indian Corn, &c., &c.

ROOTS.—Hall's Early, Carter, and other kinds of Potatoes—Altringham, Long Orange, and Large White Carrots—Ruta-Baga, Mangold Wurtzel, Sugar Beets, &c.. &c.

GARDEN AND FLOWER SEEDS of all kinds.

March 1. LUTHER TUCKER.

SENECA LAKE.

A BEAUTIFUL FARM for sale, lying on the east side of the Seneca Lake, Seneca Co., N. Y., about 7 miles south of Geneva, containing about 159 acres of the best quality of land There is about 50 acres of excellent wood and timber land, and the arable and meadow land is of the best quality and in good condition. Lowest price $50 per acre. The one-half of the purchase money may remain on bond and mortgage for many years. Title good. The farm may be viewed at any time. Apply to RICHARD DEY, on the premises, or to JAMES R. DEY, No. 51 Liberty-st., New-York, or to JACOB C. DEY, Fulton-st., Brooklyn.

Fayette, March 1, 1847—3t.

FINE PURE BRED SHEEP FOR SALE.

THE subscriber being about to give up the farming business, offers for sale his stock of Merino Sheep, consisting of 64 pure bred Merino ewes—all with lamb by the celebrated Rambouillet Buck "Grandee," owned by Rev. L. G. Bingham, of Williston, Vt. Also 50 lambs from the above-mentioned ewes, got by the Rambouillet buck "Chancellor," and the Paular "Mt. Defiance," now owned by Merrill Bingham, Esq., of Cornwall, Vt. It is believed by their owner that they are fully equal to any flock of sheep in the country for raising stock. The ewes, aside from raising a lamb each, sheared last June, upon an average, 4 lbs. 4 oz. of well washed wool—perfectly clear from gum. The wool was sent to Samuel Lawrence, Esq., of Lowell, and pronounced by him to be the right kind of wool for our farmers to raise—being the most profitable.

Satisfactory evidence of the blood can be given. Apply to the subscriber at Williston, Vt., or A. B. Allen, 187 Water-st N. Y.

THOS. H. CANFIELD.

March 1—2t.

QUINCY HALL AGRICULTURAL WAREHOUSE AND SEED STORE, BOSTON.

(*Over Quincy Market. South Market-St.*

RUGGLES, NOURSE & MASON, wholesale and retail dealers in Agricultural and Horticultural Implements, Machinery, and Seeds.

Also manufacturers of the celebrated WORCESTER EAGLE, SELF-SHARPENING, HILL-SIDE, and SUBSOIL PLOWS, and other implements, at Worcester. Mass. As their stock of implements are mostly made either by themselves at their extensive works at Worcester, or by other manufacturers especially for their trade, their assortment far exceeding in variety and quantity any establishment of the kind in this country, and being *sole agents* for the makers of several important implements of much notoriety and usefulness, they are enabled to offer very great advantages and facilities to Planters, Farmers, and Dealers.

To their before extensive assortment of Plows, they have recently added several patterns, embracing new and *important improvements* in form, construction, and fixtures, which adapt them to both shoal and extra deep plowing. Their particular form to take up the furrow slice, and turn it over in the most perfect manner, with the least *power of draft*, leaving the soil in the best possible condition for after cultivation, and production of crops, the acknowledged and unexampled strength and durability of their castings and fixtures, the uniform construction and superior finish of the wood by machinery used only by themselves, are among the peculiar characteristics of their plows.

By the combination of the *Dial Clevis*, recently patented by themselves, and the draft rod, the plow is easily arranged to make *extra deep* or *shoal work*, at the option of the operator.

FIELD, GRASS, GARDEN, FLOWER, and HERB SEEDS, which are raised by the most experienced American and European Growers, particularly for their trade, and can be relied on as genuine and fresh, and will be packed to order, at wholesale and retail, with labels of instruction relative to the time of planting and mode of culture.

Agents for the principal nurseries in the vicinity of Boston and New-York. Guano, Poudrette. Bone Dust. &c.

Catalogues containing descriptions and cuts of their extensive stock of implements and machines; also, catalogue of Garden and Field Seeds, and Grains, embracing directions for their cultivation with general observations, remarks on soils, and fertilizers, their properties and application; and upon the propagation of Fruit and Ornamental trees; the whole comprising nearly 100 octavo pages, may be had gratis on application by mail or otherwise.

Luther Tucker, sole agent at Albany, Nos. 10 and 12 Green-St., and A. B. Allen, for New-York City, No. 187 Water-St.

March 1—2t.

CHOICE VARIETIES OF FRUIT.

BY S. MOULSON,

At the Old Rochester Nursery.

TWENTY thousand trees of the celebrated Northern Spy apple, all of which are root grafted. Those seven to eight feet high, fifty cents each; medium sizes, thirty-seven and a half cents; small ones at less. A discount will be allowed to purchasers of large quantities, for the purpose of selling again. This highly desirable and long-keeping fruit, having been introduced by this establishment at an early period, the proprietor is enabled to offer larger trees upon their own stocks than are usually found; and having been grown from scions of the original bearing trees in this vicinity, parties ordering may be sure of their genuineness.

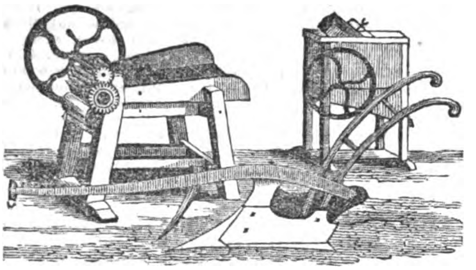
Also, a general assortment of Apple, Pear, Quince Plum, Cherry, Peach, Apricot, Nectarine, Currant, Gooseberry, Raspberry, Strawbery, and Ornamental Trees and Shrubs, which will be properly packed, when desired, for any portion of the United States, Canada, or Europe. Catalogues gratis to post-paid applicants. Orders not accompanied with remittance, must contain reference, which may be to parties residing at Rochester, Boston, New York, or Philadelphia. Also at Montreal, Kingston, Cobourg, Toronto, or Hamilton.

S. MOULSON,
March 1—2t. Office 36 Front-st., Rochester, N. Y.

FOR SALE.

A FARM of 325 acres, in Fishkill, Dutchess Co. It is partly high limestone land, with some rich alluvial meadows along the Mattewan Creek. The buildings are new and extensive—the fences all good, and the soil in fine condition. Increased production can be obtained from inexhaustible supplies of muck and limestone on the farm. The Hudson river is six miles distant, besides which the villages, mills, and factories, near, furnish abundant market. In productiveness and position, it is one of the choice locations in the country. The beauty of this part of the country, and the variety of its scenery, make it a desirable residence. Address, post-paid,

WM. VAN WYCK, Jr.,
March 1—2t.* Fishkill, Dutchess Co N. Y.



JOHN MAYHER & CO.

U. STATES AGRICULTURAL WAREHOUSE,

No. 195 Front-street, (near Fulton,) New-York.

Foundry and Machine Shop 502 *and* 504 *Water-st.*

THE subscribers respectfully invite the attention of Merchants and Dealers in AGRICULTURAL IMPLEMENTS to the superior assortment of goods which they manufacture, embracing Plows and Castings of the most approved kinds in use, and possessing all the latest improvements in style, workmanship, and material, among which are the following articles, that can be seen at their warehouse:

Pitts' Corn and Cob Crusher. Price, $40
Sinclair's do.—hand or horse. $30
Fitzgerald's Patent Burr Stone Corn Mill, $60
Sinclair's Cast Plate Corn Mill, $40
Swift's Corn, Coffee, and Drug Mill, $6 to $8
Hovey's far-famed Hay, Straw, and Stalk Cutter;
Sinclair's Hay, Straw, and Stalk Cutter;
Greene's do. do. do.
Mayher & Co.'s do. do.
Langdon's do. do. do.
I. T. Grant & Co.'s Premium Fanning Mill;
J. Mayher & Co.'s do. do.
Boston Centre Draught Premium Plows,
Bergen's Self-Sharpening Plows;
Dutcher's Plows of all kinds;
Hitchcock's do. do.
Freeborn's do. do.
Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price, $55
do. do. 4 do. $75
do. do. 2 Thresher, $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
Warren's do. do.
Sinclair's Corn Sheller and Husker;
Pitt's Horse Power and Threshing Machine;
E. Whitman's Jr., Thresher and Separator;
Subsoil Plows of different kinds.

Cultivators, Wheelbarrows, Canal Barrows, Store Trucks, Horse and Ox Carts, Mule Wagons, Ox-Yokes and Bows, Hames, Trace and Ox Chains, Road Scrapers, Ground Augurs, Shovels, Spades, Pick Axes, Hay and Manure Forks, Rakes, Hoes, Scythes, Scythe Snathes, Grain Cradles, Crow Bars, &c., &c., all of which will be sold as cheap as they can be bought at any other store in the city, and are warranted.

Gin Gear, Segments, Rag Wheels, &c.

Castings of all kinds made to order. March 1, 1847—tf.

FRUIT TREES FOR SALE CHEAP.

AT the Walworth nurseries, about 7000 thrifty Peach Trees, of the choicest varieties, cultivated in Western New-York, at $15 per hundred, or 18¾ cents smaller quantities. Address, post-paid, at Walworth, Wayne Co. N. Y., T. G. YEOMANS.

March 1—1t.

ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D. 326 Broadway, New-York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards, and nurseries, by improved cultivation, pruning, &c, that they will generally ripen well, and produce good fruit when planted in most of the northern, and all the western, middle and southern states.

New-York, March 1—2t.

COLTON'S PATENT PREMIUM BEE-HIVE.

ALL who keep bees, or wish to make money by buying and selling rights for using this hive, are respectfully invited to examine the principles on which it is built, and the advantage which it has over others. It is so constructed that you can enlarge or diminish the room according to the number of bees, and keep the comb continually covered with bees, so that the bee-moth cannot injure them in the least. It also furnishes ample room for all the bees to work at the same time, with boxes so arranged upon each side, that the comb extends from the top of the box down through the apertures to the bottom of the hive, so that they enter the boxes without leaving the comb. By removing the boxes at a suitable time, the bees can be made to swarm within two days, and save the labor of all the bees through the honey-making season. By exchanging the boxes as fast as they are filled they can be prevented from swarming at all. This hive has been in use by the inventor and others, for three years, in which there has been made from 25 to 150 lbs. of pure honey in a season. A cut of this hive may be seen in the December number of the Albany Cultivator for 1846 It has taken the first premirm at the New-York State Fair at Auburn, and at all other fairs where it has been presented. The inventor will be at New-York city through the month of March, where he will wait upon all who may call, and will sell on such terms as will be an object to those who may purchase. After that time all addresses may be made to Aaron Colton, Pittsfield Vermont, except those in the states of Maine, New-Hampshire, Massachusetts, and Vermont, (excluding Rutland Co.,) which should be made to John M. Bennett, of Gaysville, Vt.

AARON COLTON.

Pittsfield, Vt., March 1, 1847—1t.

THE WEST! THE GREAT WEST!

PRAIRIE FARMER,

Devoted to Western Agriculture, Mechanics, and Education.

VOL. VII, 1847.

PUBLISHED monthly at Chicago, Illinois, by JOHN S. WRIGHT, containing 32 large Octavo pages, besides a colored cover of 15 pages, with advertisements, anecdotes, &c., and liable only to single newspaper postage.

JOHN S. WRIGHT and J. AMBROSE WIGHT, Editors.

TERMS—$1 per annum, 6 copies for $5, 13 for $10, payable invariably in advance. All communications must be sent free of postage.

Every intelligent person at the east or south wishes to know, or should wish to know, the condition and progress of the west. Therefore they should take and read the *Prairie Farmer*, which will supply them with more reliable information than they can obtain in any other way, unless they spend hundreds of dollars in travelling.

This is no ephemeral publication, for it has reached its 7th year, and has a circulation of nearly 5000 copies, chiefly at the west, and has at least a respectable standing among kindred publications. The matter is almost wholly original, and a large share is supplied by correspondents, more than 350 in number, from all parts of the west, which makes the paper practical and western in its character; and being published chiefly for home circulation, there is no attempt to exaggerate or deceive. The information can be relied upon as *truthful*.

The SIX BACK VOLUMES, stitched in covers, subject to newspaper postage, and the 7th, as issued, will be sent for $5; and there are no works published which furnish so large an amount of information concerning the west, or its agriculture.

☞ Eastern and southern newspapers giving the above three insertions, (with this note,) in three different months, and sending a number containing it to the "Prairie Farmer, Chicago, Illinois," shall receive a copy one year without exchange.

March 1—1t.

HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing, Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price, $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.

Albany, Jan. 12, 1846. LUTHER TUCKER

ATLANTIC GARDEN AND NURSERY,

Smithtown, Long Island, near New-York.

THE subscribers offer for sale at very low prices, a large assortment of Fruit trees, including Apples, Pears, Peaches, Cherry, Quince, Nectarine, Plum, Apricot, &c., of the most approved sorts. Also, the choicest kinds of Gooseberries, Raspberries, Currants, Strawberries, &c., &c.

The assortment of Ornamental Trees, Shrubs, and Herbaceous Plants is now very extensive, including over 10,000 Evergreen Trees, and Shrubs.

The stock of Apples and Pears, containing over 35,000 trees, includes the finest sorts in cultivation.

Orders by mail, or otherwise, will recieve prompt attention, and trees will be packed in the the best manner, and forwarded to any part of the country agreeable to order.

Catalogues sent to every post-paid applicant.

Feb. 1—3t. P. DOANE & SON.

AGRICULTURAL WAREHOUSE.

183 *Front-st., New-York.*

THE subscriber offers for sale an extensive assortment of Farming and Gardening utensils, consisting in part of plows of Freeborn's, Minor's, Horton & Co.'s, Prouty & Mears', and Ruggles, Nourse & Mason's patterns. The Locked Coulter, and Wrought Share Plow.

Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Straw Cutters, of Greene's, Hovey's, Eastman's, and other most approved patterns.

Horse Powers, Threshing Machines, &c. Gin gear, Mill, Horse-power, and all other castings, constantly on hand. Also a general assortment of Brass, Copper, and Iron Wire Cloth, for Paper, Rice, and other mills. Seives, Screens, Riddles, &c., &c.

Persons ordering articles from the subscriber may depend upon having them made of the best materials and in the most workman-like manner. JOHN MOORE.

New-York, Oct. 1, 1846—6t

TO NEW-YORK FARMERS AND EMIGRANTS.

ONE hundred and fifteen thousand acres Illinois Lands for sale, in tracts of 40, 80, 120, 160 acres, or more, to suit purchasers. The lands are all first rate, and among the very best in the state, and are situated in the counties most densely settled, viz., Morgan, Scott, Cass, Mason, Menard, Green, Sangamon, Logan, Christian, Mason, McLean, Woodford, and Macoupin. To actual settlers every reasonable indulgence will be given as to time of payment. The price from $3 to $5 per acre.

A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

"*Beardstown, Cass Co., Ill., Jan.* 10, 1846.

THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

"A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

"Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYRES, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG,

Jan. 1, 1847.—6t No. 9 North Fourth-st., Philadelphia

WIRE CLOTH SIEVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

July, 1816—10 mos. 191 Water-st., New-York.

P. S.—All kinds of wire work manufactured to order.

GUANO.—200 tons, the balance of the ship Shakspeare's cargo from Ichaboe, in tight casks, for sale in lots to suit purchasers, by E. K. COLLINS & Co., 56 South-st.

The many experiments made this season from this cargo, not only prove the great gain in using it, but that it is at least equal if not superior to any other guano.

Sept, 1, 1846.—tf

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos.* 51 *and* 52 *North Market-Street, Boston.

FOR sale at this establishment, a general assortment of Agricultural and Garden Implements—Howard's Improved Patent Cast Iron Plows of all sizes. Martin's improved Eagle and other Plows; Double Mould Board, Side-Hill, Paring, and other plows, in great variety, and of the most approved patterns. Howard's Subsoil Plows, Cultivators of different descriptions; Willis' Seed Sower, (the best in use;) Geddes' and other Harrows of various patterns; Green's Straw-Cutters, Willis' Straw-Cutters, of various kinds and prices; Gault's Patent Churns, Grindstones or Friction Rollers; Cast Iron Field Rollers, (a very superior and substantial article;) Garden Rollers of cast-iron, different sizes; Iron Rakes of every size and variety; Garden Trowels, Syringes in great variety; Pruning and Budding Knives; Pruning Scissors, and Shears in great variety; Grass Hooks and Garden Shears; Garden and Field Hoes of every pattern; Scufflers every size; Pick Axes, Shovels, Spades, Dung and Garden Forks of every description; Hay Tools, including the very best Scythes manufactured in the country, (in all cases warranted;) Hall's and other Hay Rakes, Pitch-forks, Grain Cradles, Horse Rakes, Sickles, Austin's Rifles, Whet Stones, &c., &c.

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March 1—1t.

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, APRIL, 1847. No. 4.

MANAGEMENT OF FARM-YARD MANURE.

THE question is often asked, whether manure should be applied in its fresh state, or be first allowed to decompose?

In considering the subject, it may be proper to observe that some kinds of crops, as wheat and other "English grains," might be injured by the application of manure in its unfermented state—the manure increasing the liability to blight or mildew; while Indian corn, on the other hand, and most root crops, are not injuriously affected by the rankness of fresh manure, and derive as much or more benefit from its being applied in that state, as in any other. The late Judge BUEL was much in favor of unfermented manure for the corn crop, and he advised that it should be spread broadcast, and plowed in. The soil of his farm was rather light and sandy. On compact soils, it is desirable to produce a mechanical effect by the application of manures, that is to render them more friable and open; and this object can be best effected by applying the manure in a fresh state, mixed with straw or fibrous vegetable matter. But excepting in cases where it is wished to change the texture of the soil, by rendering it more light, the bulky and strawy nature of fresh manure would be rather an impediment to cultivation, and has not, that we can discover, any special advantages.

It has been said that manure can never have a greater intrinsic value than at the time it is voided by animals; and we have heard this argued as a reason for applying it to the soil as speedily as possible. It is probably true that no new principle is added to manure in passing through the process of decomposition; and yet we think there is generally an advantage in *composting* manures, and allowing them to become considerably rotted before they are applied to the land. We will give our reasons for this position.

On almost all farms there are substances, which, if properly mixed with animal manure, would enhance its value to an amount much beyond the cost attendant on the operation. The substances to which we refer, are peat, or "muck," straw, and other vegetable matters, the refuse of the barn and stock-yards. These substances contain the elements of vegetable nutrition, but in their crude state cannot be used with as much advantage as after they have been passed through some process of preparation. Peat is known to abound in fertilizing elements, but in its natural state these elements are combined with others, which, so long as the combination exists, prevent the favorable action of those which would afford food for plants. The chief deleterious principle is *tannin*, or tannic acid, and experience has shown that if the peat is passed through a fermentation in combination with animal manure, this principle is dissipated, or rendered innocuous. Perhaps the cause why peat is so much improved by being fermented in connexion with manure, is not fully ascertained. It has been suggested that the ammonia of the manure, being an alkaline salt, destroys or neutralizes the acid of the peat; but whatever may be the cause, the beneficial effect is unquestionable. Statements in regard to the value of peat compost have frequently been given to the public by those who have tried it. A compost of two parts stable dung with one part peat, mixed together and rotted, has been proved to be of equal value for most crops, to the same quantity of manure unmixed. Here, then, by the process of composting, we increase the quantity and value of manure thirty-three per cent.

It is sometimes objected that manure is wasted by fermentation. It is true that if a *high* degree of fermentation goes on in manure which is unmixed with absorbing substances, the carbonaceous matter may be more or less consumed, and the nitrogen being set free, may escape. But if the fermentation is properly regulated, and the manure is duly mixed with substances which will absorb the gases, no such waste can take place. Peat is of a similar nature to charcoal, which is known to be a most powerful absorbent, being capable, it is said, of absorbing ninety times its bulk of ammoniacal gas. It is easy to see, therefore, that peat would tend to prevent the escape of those important elements in manures, which, by fermentation, may assume a gaseous form.

While, therefore, we would not advise the fermentation of manures by themselves, we think we have shown that there is a manifest advantage in composting—the advantage consisting in the increased value of a mixture of materials, beyond the value or benefit to be derived from them when used separately.

The operation of composting may be in part carried on while the manure is accumulating. Substances should be used daily which will prevent the loss of urine or any liquids which might otherwise escape from the heap. If animals are kept in barns or stables which have cellars under them for the reception of the manure, the liquid portions are saved with much less trouble than under other circumstances, as it is only necessary that the bottom and sides of the cellar should be sufficiently tight to prevent any soak or leakage. The manure should be leveled occasionally, and a sufficient quantity of muck or litter should be from time to time thrown over it to absorb the liquids and render the mass of the proper consistency to be carted with convenience.

Where there is no cellar under the barn, the animals should be well supplied with litter; and muck, or peat, which was previously in a tolerably dry state, may be kept constantly under them, excepting when the weather is so cold that it would freeze. Charcoal dust from the beds or bottoms of coal-pits, is preferable to peat for using under animals, as it is generally dryer and will absorb more liquid. A quantity of peat, or coal dust may be kept in some empty stall, or in a corner of the barn, where it will seldom freeze, if the barn is as tight and warm as it should be for the comfort of the cattle. Sheep pens or yards should have a layer of muck, of several inches in thickness, spread over them in the fall, before the sheep are taken in; this will absorb the urine, a considerable portion of which would otherwise soak into the ground.

In making compost heaps, the different kinds of manure should be so mixed that the fermentation may be equal and uniform through the mass. The manure of horses and sheep has a much greater tendency to ferment than that from neat cattle, and when piled by itself it is liable to acquire too high a degree of heat; but by mixing all together this tendency is counteracted, and the quality of the whole is improved. In forming the heap, a layer of muck should be put at the bottom, then a layer of manure spread evenly over it, and so on in alternate layers, covering the whole at last with muck to absorb the exhalations. Considerable moisture is necessary for proper fermentation—the heap should neither be too wet nor too dry—either extreme will retard the process. If the manure has been kept in a cellar, and all the urine voided by the animals has been added to it, it will be sufficiently moist. Urine, on account of the large proportion of nitrogen it contains, greatly increases the tendency to fermentation. In some instances the liquids of stables are conveyed to tanks constructed for the purpose, from which the liquid is pumped up and thrown over the compost heap. Sometimes the manure is piled near the tanks, and is mixed with corn-stalks, peat, or any rubbish which it is wished to convert into manure, and by means of a spout the urine is conveyed over every part of the heap. The drainage goes back to the tank, so that none is wasted. This is a very good plan, and a good compost may be made in this way in a short time.

As to the time required for reducing compost to the required state of rottenness, something, of course, will depend on the state of the weather, and the nature of the materials used, as well as on the extent to which the decomposition is to be carried. In cold weather more time will be required than in hot weather, and the finer and more rotten the manure is to be made, the more time will be taken. Some difference of opinion exists as to the state in which manure should be applied to produce the greatest effect. Rev. W. L. RHAM, in the "*Dictionary of the Farm,*" observes—"The best state in which dung can be carried to the land, is, according to the best informed practical agriculturists, when the straw is so rotten that it readily breaks into short pieces, without having entirely lost its form; it should then be of a brown or mahogany color, uniform throughout the mass." This may be a good rule, and it is probable that where peat was used in the compost, it would have undergone a sufficient fermentation, and have become sufficiently impregnated with alkaline salts, by the time the manure had been brought into this condition. Practice and observation, however, can soon determine the point.

In this climate, manure is not usually wanted for Indian corn before the middle of May, and if it is composted a month beforehand, it will generally be found sufficiently reduced by the time it is wanted. If it is turned over once, the fermentation will be more complete, and the mixture of the various materials more perfect. If it is not turned over, it should be cut down in such a manner, at the time it is carted to the field, that the coarser parts may be made fine, and the whole well mixed. If the heap should become too hot while fermenting, as may be known by the heat imparted to a stick thrust into the middle, holes should be made with an iron bar or stout stake, to give ventilation; or the heap may be turned over. If the temperature is so high as to heat the stick to the degree that it will burn the fingers, when it is drawn from the pile, it is consuming the manure, and should be checked.

......

MANNER OF APPLYING MANURE TO THE SOIL.—There is much difference of opinion in regard to the best mode of applying manures. Some hold that they should always be plowed in, and give as a reason that "manure never goes down, but if lost at all it is by evaporation." Others go counter to this rule in all respects, and contend that "surface manuring" is far preferable—that the valuable principles of manure cannot be carried off by the air, but are only in danger of being lost by "leaching." The advocates of the two systems may be regarded as in a situation similar to the two knights who fought over the white and black shield—both are in part right, in part wrong.

As regards the position that manure is never lost by going downward, every man's observation may have taught him that it is an error. Whoever has examined the earth under his manure-heaps, or in his barn-yard, must have found palpable evidence that the fertilizing elements of manure may penetrate to a greater depth than is commonly reached by the plow. In one instance within the writer's observation, the surface of the ground where a barn had stood was carried off to the depth of eighteen inches to two feet, and yet for several years afterwards the spot, (though in the midst of a field,) was plainly discoverable in the increased luxuriance of the crops it produced. The cases cited may be said to be extreme ones, but they show that the theory to which we refer is false.

The idea that nothing can be lost from manure by exhalation, does not seem to be any better supported by facts than the opposite theory previously considered. Carbon and nitrogen, which constitute the chief elements of manure, are both capable of assuming an aeriform state. The nitrogen, which exists in manure for the most part in the form of ammonia, readily becomes volatile, and escapes into the air. The escape of this substance from manure heaps and fermenting urine, is readily perceived by the strong smell emitted. The dung dropped on pastures by cattle and horses, does comparatively but little good. It mostly dries up, and loses its value. If all the strength of it soaked into the soil, should we not see a greater effect from it? The urine dropped by animals is immediately absorbed, and the effect is sooner or later strikingly seen in the rankness of the grass.

The true point to be observed in the application of manures, is to place them where none of their value shall be wasted, and at the same time in a situation to be acted on by the agents of decomposition. These agents are chiefly heat, air, and moisture. Heat is required, because in its absence substances are without change; air is required because oxygen, a kind of air and a part of the atmosphere, is the greatest decomposing element in nature; and moisture is required because its absorption by objects admits the entrance and action of oxygen. Light, also, (and perhaps electricity,) exercises some agency in decomposition. The medicines of the doctor and apothecary are sometimes decomposed by the influence of light, even when contained in vessels which are perfectly impervious to the air. It is on account of this influence that wines and other fermented liquors are kept in the dark. Every one may have noticed the effect of light in making vinegar, and may have seen how the souring process is hastened by setting the barrel where the sun will shine on it, and by turning the rays on the liquor by putting a bottle in the bung-hole.

The influences essential to the germination of seeds, are nearly the same as those which promote decomposition. The seeds of some plants will remain inert, when buried deep in the soil, for an indefinite period, and on being brought near the surface, or within the influence of heat, air, and light, will germinate and produce perfectly healthy plants. Instances of this kind are within the observation of every farmer. When a furrow-slice of seven or eight inches in thickness is turned over in a rich soil, (though that soil may not have been plowed for years before,) the newly exposed surface soon teems with a growth of plants, produced from seeds which could not vegetate under the deep covering where they had been placed.

Now it follows from our previous reasoning, that the circumstances which would prevent the germination of seeds would prevent or retard the action of manures. We conclude, therefore, that manure lying at the bottom of a furrow eight inches deep, would be of much less benefit to growing plants than if it was only from two to three inches below the surface.

From the principles above laid down, the following rule is deduced in regard to the application of manures. That it is best to keep them near the surface, well mixed with earth, in which situation they are most readily brought into a soluble condition and rendered available to the support of plants—their valuable qualities being neither liable to be dissipated by the atmosphere or washed too deeply into the soil.

An exception to this rule is made in regard to soils which it is wished to render more loose and friable by strawy manure or fibrous vegetable matter.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

RURAL NOTICES ABROAD—No. III.—By Caius.

The Campagna about Rome.—All the implements which the *fattore* or farmer can use, are of most homely and inefficient construction; the import duties being so enormous, that no improved machinery can be introduced except at a ruinous cost. The same suicidal policy has hitherto prevented the introduction of new species of grain, or new methods of tillage. Another obstacle to the profitable cultivation of the Campagna, lies in the unhealthy state of its atmosphere during several of the months of summer and autumn. The grain, after being sown under the careless mode of culture of which I have spoken, has hardly begun to ripen over the plain, when the herdsmen are obliged to withdraw their cattle to the pasture lands upon the Sabine hills, and such few as linger latest upon the Campagna, pant and groan under the stifling atmosphere. Meantime the grain yellows under the hot sun; there are no wandering flocks to disturb it; not a stray beast can be seen over the rolling land. Even the couriers or post-riders, and *fattore*, looking after their crops, make haste to get over the ground of the malaria. In this season the corn is ripe, and must be cut. A few of the most wretched of the mountain peasantry are tempted by the offer of large prices, to come down to the harvesting. Under the influence of the heat and the foul air, they of course perform the work indifferently, and little or no method can be observed. Many poor fellows fall victims every year to the malaria of harvest time, and more still carry back with them to their mountain homes, frames irreparably enervated by the influence of a single summer's campaign. The grain is often injured by wet, still oftener by neglect, and I have seen it lying upon the ground, as left by the reaper, a fortnight after the harvest, the heads moulded, and the straw nearly rotten. After all, the grain pays its entrance duty, on passing through the gates of the city. After harvest the Campagna is deserted; now and then a courier goes galloping over the roads leading to the mountains, or a post-chaise or a diligence toils along in a cloud of dust, but the fields are desolate, and smoking with the heat, and the evaporation of the water in the ditches. It is thought by many intelligent foreign observers, that a thorough system of drainage would both improve the fertility of the Campagna and lessen materially the effects of the malaria. But the operations for such an end would require to be conducted on too gigantic and liberal a scale for the bigoted and resourceless papal government.

In the nearer neighborhood of Rome, and of the towns upon the borders of the Campagna, the rotation is from grain to grasses—the field resting a year or two in grass only. Farther from the towns, grain is put in only twice in a period of ten years.

Vast tracts of land, not only upon the Campagna, but upon the mountains, belong to the princely families of Rome,—embracing sometimes whole towns in their circuit, the rental of whose houses goes to sustain the splendor of a princely life. The princes themselves know little and care little for the management of the lands which are subject to their control. They deal through their secretaries with the *fattore*; the fattore secures his commissions, and a good rental to the Prince, and he is satisfied. Perhaps the princely family leaves the city a day or two in autumn, to pass the time at some old villa upon their Sabine estates; in that event, they have troops of city friends, and give grand dinners, and wander to the sound of music and fountains, between rich linden hedges, and through clipped avenues,—but of their farm lands they never inquire.

Prince Borghese has latterly given more attention to the cultivation of his estates—perhaps through the influence of his wife, who is an English lady. Near his villa grounds by the city, he has introduced the cultivation of the turnep, and upon his hill lands has encouraged more thorough tillage, and a scientific rotation. Prince Rospigliosi is still more zealous; his estates lying near Palestrina, are under the most orderly management of any that I observed within the Papal territory. The land was well plowed—improved implements having been introduced; the crops had been well attended—the hedges, where they existed, in excellent order, and the ditching, where rendered necessary, well laid out. It was upon his estate that I observed the only true American stone wall which I remember seeing in Italy. The Prince is much beloved by the peasantry, and by his superior culture is enabled to pay more generously than most other proprietors. Many laborers are furnished with a neat cottage, a bowl of soup, and a small bottle of wine per day, with from one to two pauls, as the season may demand. The workmen are contented at their labors, but do not seem efficient people. They may be seen by crowds every Sunday during the winter at Rome; they collect in their steeple-crowned hats in the old portions of the city, and after saying mass devoutly at some church of the neighborhood, make bargains with the *fattore*, who meet them on those occasions, for spring and summer service upon the hills. By three or four of the afternoon, they retire to some wine shop, and after drinking and dancing an hour, they shoulder their pack, which they bring in order to be in readiness to serve a new master, and go out again, back over the Campagna. Houses are rarely seen over this rolling plain; only here and there some tall stone building lifts itself from the level, and sometimes a little smoke oozes from the top into the blue sky. What the buildings have served for in past days—whether look-out places for bandits, or towers of princely families, it is not my present purpose to inquire. Now-a-days, a herdsman takes up his abode in them, and lives upon stores of cheese, and bread, and wine. Perhaps he keeps a shaggy pony or two upon the first floor, and a cart. In the loft above is placed the grain, and between bare stone walls, he makes his cot of straw. At the foot of the building he may have thrown a little enclosure about a patch of cabbages, and a goat or two scramble over the broken walls around, and furnish him his supply of milk. The farm-houses proper, at the edge of the Campagna, and upon the slopes above, are different. They are substantial, low buildings of stone, a square court walled in, and where height of building will admit, the stables under the living quarters of the family. They possess no neatness, and are only picturesque, as being gray and old, and always prettily situated. The vineyards come up to the very edge of the court, and are planted as in France, in rows, and trained to the same height to poles. A rude hawthorn hedge, will perhaps enclose a vegetable garden near the premises. In these will be seen growing, turneps, potatoes, cabbage, and a species of dill or fennel, a great favorite with the Romans, and eaten as we eat celery, earthing the stalks to blanch them. Caius.

COLMAN'S EUROPEAN AGRICULTURE--Part 8.

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This number opens with a continuation of the subject of "Crops." He describes at length the different modes of cultivating wheat, showing the advantages claimed for the broad-cast, the drilling, and the dibbling systems. He thinks drilling is greatly to be preferred to sowing broadcast. The first advantage is the more equal distribution of seed, the next, the greater chance the plants have of spreading, and the third, the opportunity it affords of cleaning and cultivating the crop. He observes—"I am of an opinion, borne out very strongly by facts which have come under my observation, that wheat in the early period of its growth, is as much benefitted by cultivation as any plant which is grown; and the injury which is done, both to the growth of the plant and to the sample of grain, by the weeds which ripen their seeds among it, renders the weeding or cleaning of the crop of great importance."

The main saving or advantage in dibbling, is in the quantity of seed sown; but against this advantage is to be placed, says Mr. C., "the danger from insects and frost, and the imperfect germination of the seed." He does not, however, attempt to decide in regard to the relative value of dibbling compared with the other modes of sowing or planting wheat; but it may not be improper to remark in passing, that from all we can learn, the dibbling mode is less approved in England now than it was a short time since.

Time of Harvesting Wheat.—In regard to the proper time of harvesting wheat, Mr. Colman observes that it has been a matter of much discussion; but in his opinion, "the results of repeated experiments, with a view to determine the best time, all point to an earlier rather than a late cutting." "The best rule for harvesting," he continues, "is not merely when the stalk below the head has changed color, and the circulations have consequently ceased, but when the grain, though it has ceased to yield any milk upon pressure, is yet soft. It then ripens well in the sheaf; it yields more and better flour; and none is lost by shaking, as when it is suffered to stand until it has become dead ripe."

Mr. C. remarks that wheat is seldom put in barns in England; but is generally made into stacks, which are laid on "staddles" made either of wood or cast iron, about eighteen inches or two feet in height. When placed on these, it is inaccessible to rats, and if properly put up, will keep any length of time. He states that—"in parts of Cambridgeshire, where the stacks were placed on the ground, they were plastered with lime mortar about two feet from the ground up, and whitewashed, which was regarded as a preventive against vermin." It is claimed that wheat is not so likely to be heated in stacks as when stored in barns; but it is observed that the "thatcher's art is a matter of great skill and experience; and as long as wooden barns are erected among us at so small an expense, it can scarcely be expected that we shall have patience to adopt it." As an "agricultural picture," however, he observes that he knows of nothing "more beautiful than a neat farm-house in the midst of a crowded and well-thatched stack-yard."

As to kinds of wheat, Mr. Colman mentioned "Hunter's" wheat, which is the kind most extensively cultivated in Scotland; the "Chidham" wheat, the "Whittington" wheat, and the "Talavera" wheat; but he adds—"in truth, I have seen none superior to kinds common in the United States, especially the white western wheats. Indeed, the bakers here, for the purpose of producing the finest bread and confectionary, prefer the best American flour."

Of the average yield of wheat in England, Mr. C. is no doubt correct in the supposition that there is no country where it is so large, though the product, he states, has there "doubled within the last thirty or forty years." He says—"I am quite aware that, in many parts of England, the crops are still small, and do not exceed sixteen bushels to an acre; but on the estate of the late Mr. Coke, afterwards Lord Leicester—where, when he came to reside on his property, it was thought, on account of the thinness and poverty of the soil, wheat would not grow,—the average yield is from forty to forty-eight bushels per acre; and I have already referred to a large farm where the crop on the whole farm, in 1844, '5,—a most favorable season—averaged fifty-six bushels per acre. These are most encouraging results; since, beyond all question, in an instance referred to, eighty bushels have been produced, who will say that the limits of improvement have been generally even approached? All this too has been, without doubt, the effect of improved cultivation."

Oats.—Oats are cultivated largely in Great Britain. In Scotland and Ireland, they are cultivated extensively for food for the population; and when the meal is of the best quality, in some forms in which it is cooked, it is not only palatable, but extremely agreeable. Porridge is prepared merely by boiling it in water with some salt thrown in until it reaches a proper consistence, and in this form is ordinarily eaten with milk. Brose is prepared simply by scalding the meal with boiling water, and throwing in a little salt. * * * It will not do to say that it is not a nutritious substance. The allowance, formerly, for a Scotch laborer, was a peck of oatmeal per week, and two scotch pints, or four quarts of milk per day; and this comprehended the whole of his subsistence. Where more hardy or more skilful laborers are to be found; where we are to look for a finer race of people than the Scotch,—more erect, more muscular, more energetic, with more of physical or of intellectual power, I know not; and this dish is, perhaps, never absent from a Scotch table, and with a large portion of the Scotch, constitutes their principal food."

The methods of cultivating oats in Britain, it is said, do not differ widely from the methods prevailing with us. They are sometimes sown broadcast, and sometimes drilled. In the latter case four bushels of seed is sown per acre; in the former, as much as six bushels is sometimes sown. The reason given for so large a quantity of seed, is, that though oats will tiller, yet the side shoots are seldom of much value, and it is best, therefore, to sow seed enough to give the requisite number of stems. In yield, Mr. C. states that "the crop varies from 30 to 60, and sometimes 80 bushels per acre." In regard to harvesting, he says—"it is strongly advised to cut oats early, as soon as the stalk turns yellow under the head, and even while the other parts of it are green. None are lost in such case by shaking out; the grain itself is brighter, and the straw is saved in a much more palatable condition for the animals to whom it is fed."

The "potato oat" is said to be much esteemed. "The grain is short and white, the panicles well filled, and it is usually without beard or awns." It sometimes weighs forty-six pounds per bushel." The "Hopetown oat" is another favorite kind of Scotch oat. "It is esteemed better adapted to light, than strong clay soils. Its weight is as great as that of the potato oat. The black Tartarian oat is another kind said to be much cultivated in England. "They are well known among us," says Mr. C., "having the panicles all on one side;" on account of this peculiarity, they are sometimes called "horse-mane oats," in some parts of this country.

Barley.—The average yield of this grain in England, is stated to be from 30 to 50 bushels, and it usually weighs from 45 to 50 lbs. per bushel. On good loamy soils, it is thought to be more profitable than oats; it is not so profitable on heavy lands. It is principally used for making beer, which is said to be the "favorite drink of all the lower classes, and is seldom absent from the tables of the rich and luxurious." The kind called "Chevalier barley," is most esteemed.

Rye, we are informed, is very little cultivated in Great Britain, and Mr. Colman says he has never seen it used there for bread.

The English Horse Bean, is an important article with the British farmer. It yields on an average, 30 bushels per acre, but sometimes gives 60 or even 70 bushels. One quart of beans is considered equal to two quarts of oats for horses.

Turneps.—The turnep culture has been called the "sheet-anchor of British husbandry;" and from Mr. Colman's account, we should be inclined to think the observation agreed with his opinion. "The turnep crop," says he, "is to be considered the foundation of the improved husbandry of England, in the means which it affords of supporting an increased stock, in the abundance of enriching manure which it thus supplies, and in the cleanness of cultivation to which it leads as a preparation for other crops."

He informs us that "the practice of sowing broadcast, which formerly prevailed, is nearly abandoned." Where land is thin and liable to suffer by drouth, it is preferred to sow them in drills on a flat surface, but on rich soil, it is deemed best to sow on ridges, which, for Swedes it is thought, should be at least twenty-seven inches apart, and of the distance of a foot or more in the rows. The best varieties, Mr. Colman thinks, are the yellow Aberdeen, and the Swedish, or ruta-baga, both which will keep well through the winter, and the Swedes will keep till late in spring.

Mr. Colman admits that the advantages of growing turneps are much greater in England than they can be in this country, on account of the more favorable state of the English climate, both in regard to the growth of the turnep and the convenience of keeping it through the winter. But he says—"I believe our farmers would find a very great advantage in growing esculent vegetables for sheep and cattle, instead of keeping them as is now done, through our long and severe winters exclusively upon dry food. They would be more useful to sheep in the lambing season, and for cows in milk; and though, in fattening properties I know no article, all things considered, superior to our Indian corn, yet they certainly would come most beneficially in aid of that. I do not assert that turneps are the best crop for this purpose, but Swede turneps are certainly among the best. Mangel-wurzel, carrots, cabbages, parsneps, and potatoes, are all useful. * * * The conclusion to which I have come, and in which I am daily confirmed, and with which I wish the farmers of the United States could be more and more impressed, is, that an abundant supply of succulent food should be provided for their stock during our long winters,—first as conducing to the health of the stock; and next, as contributing essentially to the improvement of fattening stock, and as enabling the farmer to keep more stock; and lastly as furnishing him with the best means of enriching his farm, and extending and improving all his other crops.

Potatoes are said to be of better quality in England, generally, than in this country; though Mr. C. says those grown in the northern part of Maine and in New-Brunswick and Nova Scotia, are not excelled by any he has met with. He observes that new land and a moist climate are favorable to the production of the potato in its greatest excellence. Nothing peculiar is stated in regard to their cultivation.

Grass Lands.—Mr. Colman informs us that in laying down lands to grass, the English use large quantities of seed—"from thirty to forty pounds, and these of great variety. In the rotation, the principal plants cultivated are the clovers, and the rye and orchard grass, or cocksfoot. The "*cow clover*" is a permanent, but is more valued for pasture than for hay. In making clover hay, we are told "it is never tossed about and and spread, but simply turned and made up, first into small handfuls, and afterwards into cocks, and it sometimes receives heavy rains without as much damage as we should suppose."

We shall continue our notices next month, giving a summary of Mr. Colman's remarks on "Live Stock."

LETTERS FROM HOLLAND—No. III.

Utrecht, Dec. 25, 1846.

Messrs. Editors—My attention has been lately directed to that gigantic work of internal improvement commenced some years since in this country, the draining of the Haarlemer Meer, or Lake of Haarlem.

It is probable that many of your readers may have already seen some accounts of this undertaking, but a more particular notice may be of interest. Previous to the 15th century this lake scarcely existed, but toward the end of the 16th, a number of small lakes previously separated, owing to a rapid increase of their waters, burst, and overflowing the intervening space, united themselves permanently into one. The lake is eleven leagues in circumference, and has about 70 square miles of surface. It is somewhat higher than most of the adjoining country, and is only restrained from overwhelming a very large district by enormous dykes. There being no protection from the force of the winds, they produce a terrible effect, and drive the waters against the dykes with such fury that sometimes even all of their strength and solidity offers a scarcely adequate resistance.

North Holland and South Holland are connected but by a narrow neck of land, and only the most constant care and watchfulness prevents the Haarlemer Meer from cutting through this, and converting the former into an island. For a considerable distance it is separated from the Y., another inland sea, merely by a dyke; the Y is lower than the Haarlemer Meer, and the effect of opening the sluices which connect them, would be to submerge Amsterdam, and a large portion of the surrounding country. The principal outlet is through the sluices of Katugh, where also the Rhine discharges itself into the sea. The annual cost of works of defence, is between $20 and $30,000.

The depth of the lake is 14 feet, six feet of which only are water; the rest is mud, an alluvial deposit brought down by the Rhine. This must be of a clayey character, as it is used very largely in the manufacture of those small, hard, Dutch bricks called *clinkers*, some specimens of which, I believe, are still to be seen in Albany. It is very likely that they came from the bottom of the Haarlemer Meer, and *originally* from the mountains of Switzerland, from whence their materials were washed down and deposited by the Rhine.

It is now six years since the operations necessary to the drying of this lake were commenced. The commerce which passed through it was very great, and it was necessary, therefore, to build a canal around it by which vessels could pass, instead of going across. This canal will also serve the purpose of discharging the waters when pumped up. Of course, a double water-tight rampart, or dyke was necessary, in itself a work of great magnitude. This was commenced in 1840, and is now complete.

The next step was to consider the best means of pumping out the water, the lake having no natural outfall. It was decided to make the attempt by means of three enormous steam engines. One of these called the Seeghwater, is now finished, and in its place ready for work; the other two are in progress, and are expected to be completed and erected during the coming year. They are all made in England, and are remarkable specimens of the perfection of English workmanship; being, I believe, much larger than any ever before made.

The Seeghwater engine discharges the water which it raises into the sea by the sluices of Katwyk; the other two will discharge in different directions, and be located in other parts of the lake.

This engine is erected in a circular house, from which radiate eleven balance beams, working as many pumps. These are all brought up at once by an enormous piston, and then fall by their own weight. The weight of the piston and cross-head, with parts attached, is 90 tons; this dead weight has to be lifted at each stroke, but of course aids greatly in bringing down the balance-beams. The engine is on the high pressure expansive principle, and there are two steam cylinders, one of 84 inches in diameter, within another of 144 inches. The weight of iron in the engine, pumps, &c., is 640 tons.

It will not commence working regularly until March next, but has been tried within the last few months, repeatedly, and found to answer every expectation; 112 tons of water are raised 10 feet at each stroke, 1,000,000 tons in 25¼ hours. When the two others add their assistance, 2,800,000 tons will be discharged every 24 hours. The quantity of water to be lifted is estimated at 1,000,000,000 of tons, and allowing for rains and other contingencies, they expect to pump it out in 400 days.

The cost of the Seeghwater engine, pumps, building, and all included, was £36,000, or about $170,000, and the total cost of the pumping, including that of engines, is estimated at not more than £140,000, or about $670,000. 70,000 acres will thus be rendered serviceable to man—will at once be divided into farms and brought under cultivation. The annual cost of keeping it dry, will be between $20 and $30,000, about the same as that of the present works of defence. This annual drainage will probably amount to 54,000,000 of tons.

The introduction of these powerful steam engines forms a new era in the history of draining. The expense of pumping out this lake by wind, would have been £308,000, or about $1,500,000; it would have required 114 mills of the largest class, for four years, and the annual cost of keeping it dry by means of windmills, would be upwards of $30,000.

The prospects of this undertaking are so auspicious, and the capabilities of this new method of draining seem so great, that a proposal is now before the government for draining the Zuider Zee, and it is confidently hoped that permission will be given. An enormous dyke must first be constructed across its narrowest portion, before reaching the Helder. It will enclose a space of about 40 miles in length, and as many in width. Numerous rivers discharge themselves into this sea, and these must be carried across the redeemed country on double dykes.

This undertaking, if carried into execution, will be one of the boldest that the world has ever witnessed, and will be worthy of the ancient renown of the Dutch people, showing the world that in industry and perseverance they have not degenerated. They have not, however, yet learned to move rapidly, and this subject will probably be only one for lengthened deliberations during some years to come. The resolve and the commencement are not so nearly simultaneous here as in England and America. Yours truly, John P. Norton.

FENCES ON FLOODED GROUNDS.

Alluvial flats are justly regarded as among the most productive of all lands. But serious inconvenience and much vexation often result from the destruction and removal of the fences by inundations. There is no doubt that in most cases the evil might be greatly lessened.

Whatever kind of fence may be adopted on such lands, one great and leading requisite, almost totally neglected, is, *placing the line of the fence, not perpendicularly, but* OBLIQUELY *to the current.* Logs, or other obstructions, then, which may be floating in the current, strike it with much less force; and are soon by a gradual lateral motion, thrown into the main current and swept off.

Different kinds of fence may be adopted. A hedge of plashed willows sometimes succeeds well. It is more effectual when young if planted on a wide ditch bank; and such bank also affords protection during deep floods to the young trees. A board fence, if placed on such a bank will sometimes be sufficient; if there is danger of the posts being drawn by the lifting of the ice early in spring, a two inch white oak or cedar pin, at right angles through the lower end of the post, secured by filling the hole snugly with stones, will be of essential service. Where the current is quite rapid, it will sometimes happen that a bank and ditch cannnot be adopted, on account of washing.

A mode of building board fences on such grounds has been lately described in the American Farmer, and may be of service where grounds are severely swept by floods, and might be placed near the main channel of water, where the oblique, fixed fence could not be adopted, or would not stand. It is made nearly as the common post and rail fence, but movable on a hinge joint at the bottom, fastened to short stumps of posts set firmly in the ground, so that the flood at most only prostrates it, but does not carry it off, and it may be easily and quickly righted again. About three *lengths* of the fence are connected together by a long pole running through the bottom ends of the four posts forming these three lengths, and at the same time running through the upper ends of the stumps just mentioned, three inch holes being bored through each for this purpose. The lower pole turning in the holes in the stumps forms the hinge joint. A similar pole runs through the corresponding upper ends of the posts. The fence is kept in an upright position by slanting braces set on the upper pole. When a flood is so great as to sweep away a common fence, this is only prostrated by the displacement of the braces; and as soon as the water subsides, it is very quickly set up to its original position. T.

MODE OF UNDER-DRAINING.

AN obstacle to the practice of under draining in this country, is the difficulty or expense of obtaining tiles for forming the drains; many neighborhoods, however, ever, abound with a material which will answer nearly as well—that is, small stones. We have seen them used in a few instances, and the drains thus formed have operated well for a long time. We presume that drainage would be more frequently resorted to, if it were generally known that the stones, which in many sections occupy the soil to the actual hindrance of cultivation, could be used with good advantage in filling the drains. From a series of articles which have been published in the *Farmer's Magazine*, on the "Agriculture of Aberdeenshire," it appears that stones for filling drains are "almost exclusively" used in that country. There appear to be several modes of forming drains, and of putting the stones into them. "Many farmers," it is said, agreeably to the Deanston plan, break the stones to a small size, like those used in repairing the public roads; and put them promiscuously in to a certain depth. Several others, however, are of opinion that each drain should be furnished with an 'eye,' or open conduit in the bottom.

"The stones employed in draining are procured from two sources, the surface of the ground and the quarry. The small round stones annually gathered off the grass-fields, as well as those brought to the surface by the action of the tillage implements, are carted into heaps in convenient situations, with the intention of being subsequently employed (if necessary,) in draining. The fields in many parts of the country contain a great number of such stones, and they are considered to be peculiarly well adapted for draining; they also constitute an economical material, since it is necessray or proper at all events, to collect and remove them off the ground; and they require little preparation before being put into the drains.

"A kind of drain which was formerly much employed, and is still frequently constructed in particular places, is made in the following manner: A trench of about twenty-four inches in width at the top, from sixteen to eighteen inches at the bottom, and of such depth as the nature and texture of the subsoil, and other circumstances may render necessary in order to obtain a secure foundation on which the stones may firmly rest, is cut through the field to be drained in such a direction as is considered best calculated for carrying off the water. After the bottom of the drain has been made quite even, and all loose soil cleared out, two rows of medium-sized stones, set obliquely, and leaning to each other at the top, like the roofing of a house, are carefully laid for the passage of the water. If the drain be narrow, and the stones employed are of tolerable size, the whole of the water passes through between these two rows; but if the stones be small, and a large flow of water is expected, there are two and sometimes three rows of these couples, with a flat stone between every two rows, which, together, will void a considerable stream. A quantity of small stones collected off the fields is then thrown promiscuously above these, until the top of the drain is within sixteen or eighteen inches of the surface of the gronnd. The stones being rendered uniform on the top, are covered either with heath or turf cut from the adjacent land, if the field is in grass; after which a sufficient quantity of the earth thrown out in excavating the drain, is returned, and the rest scattered over the ground. This description of drain is sometimes employed as a 'leader' for receiving and conveying away water from small drains; and by using pretty large stones for couples, a copious stream will be voided by a drain so constructed. It is also well adapted for conducting water from springs, is easily formed, and will continue in efficient operation for an indefinite period, provided proper care is taken in its construction."

The advantage of using stones of so small a size as is mentioned, we do not readily discover. It is stated that they are in some instances broken down to a size that will pass through a ring two and a half inches in diameter. The practice, however, of filling drains entirely with such small stones, is not considered proper in all cases. A great proportion of the land in Aberdeenshire which stands most in need of draining, is said to abound in ferruginous matter or iron ore. In many places an indurated stratum, known 'by the name of "*moorband pan*," has been formed between the soil and subsoil. The writer observes, that—"wherever the oxide or peroxide of iron exists in any considerable quantity in the soil, it is considered injudicious by the majority of Aberdeenshire farmers to drain with broken stones put in after the Deanston fashion, though they are almost unanimously of the opinion that this is the best method that can be adopted in the draining of land containing only a due proportion of iron." The objection to filling entirely with small stones in such soils as above described, arises from the fact that the ferruginous matter in making its way through the stones, leaves, and ochery deposit, which in time renders the drains useless by obstructing the passage of the water "In several instances," it is said, "drains filled with broken stones have had to be re-opened in consequence of becoming choaked up. when the deposit alluded to was discovered, and at once accounted for the progress having been impeded." It is therefore concluded that the only safe mode of draining with stones such land as described, is to furnish each drain with a well formed 'eye,' which affords a channel for the free passage of the water.

The mode of forming the "eye," is to make a low wall on each side of the bottom of the ditch, which is covered by flat stones. The height of the eye is nine inches, and the width commonly about seven inches. If the bottom of the ditch is soft, it is paved with round stones previous to laying the sides; and in fact it appears to be considered advisable to pave the bottom of all main drains, as there is a liability of the water affecting the foundation, and endangering the safety of the drains. But it should be remembered, that it is only in the ferruginous soils above described, that eyes are deemed necessary; as in all other situations the mere filling with stones is believed to be equally if not more efficacious and durable than those formed in any other way.

YIELD OF WHEAT FROM A SINGLE HEAD.—Mr. COLMAN mentions that Mr. JONAS, of Cambridgeshire, England, in 1838, dibbled in 50 kernels, the produce of one ear, 30 of which only grew. The product was 14¾ ounces. This being sown in 1839 produced 1¼ bushels; which was sown in 1840, and produced 45 bushels, and this in 1841 produced 537 bushels. He also mentions a case of remarkable increase from eighteen ears in four years. The first produce of these ears produced 7¼ bushels, the second 108½ bushels, and the the third 1868 bushels.

THE POTATO DISEASE.

WE have lately received a crowd of communications in relation to the malady which has so generally attacked the potato throughout a large portion of the world. As we cannot see that the public good would be in any way subserved by the publication of matter which throws no new light on the subject, we have concluded to dispose of these communications by giving a brief summary of them in a single chapter. We are satisfied that all speculations as to the cause of the trouble have amounted to nothing, so far as regards the point aimed at; and this is the conclusion to which those who have devoted the most time and attention to the subject have generally come. And as to remedies, we agree with Prof. **FROMBERG**,[*] that "until the cause of this disease is known, no efficacious remedy can reasonably be expected to be found. It is," he adds, "the department of science to proceed from *fixed* points, from causes into effects, and every other way is hardly deserving of any other name than empiricism."

As to the extent of the disease in this country, we hear of it from New Brunswick and the Canadas, to the Carolinas and the country bordering on the Mississippi, though within this area there are some neighborhoods where it has not yet shown itself. It is generally said to be less prevalent on dry than on wet land.

LEVI J. HOPKINS, Throopsville, Cayuga Co., N. Y., writes—"the potato disease seems to be universally prevalent through this region, though differing in destructiveness on different soils. It prevails least on sandy and most on clay soils. * * * Here, as everywhere else, no one can give any reason as to the cause. Early planting is generally considered best. When dug they should be put in a dry place—putting them into pits, in the usual way, seems to be sure destruction to them."

A. W. HOWLETT, of Castile, Wyoming County, N. Y., writes—"My potatoes were all sound this year and remain so. There were not many rotten ones in this section the past season."

SAMUEL WARING, of Morrisdale, Pa., states—"Potatoes have rotted very generally, particularly when they were planted deep, or manured with much fresh dung."

RALPH R. PHELPS, of Manchester, Ct., states that the disease has prevailed in that section, and that it appears to have extended itself to turneps, beets and cabbages.

JOHN F. ALLEN, of Newport, Herkimer Co., N. Y., states that a friend of his accidentally had some potatoes planted on buckwheat-stubble, which produced a crop free from rot, while others, in similar circumstances in other respects, were lost. He mentioned the fact to his neighbors, several of whom stated that the same thing had occurred in their experience. He therefore advises that buckwheat straw be spread on the ground planted to potatoes. He says the blight has not been confined to potatoes, but in his neighborhood has been noticed on Indian corn.

We should have about as much confidence in the efficacy of buckwheat stubble or straw, as in the following; both, if sufficiently tried, will probably prove to be no preventive.

ALEXANDER LEEDS, of St. Josephs, Michigan, states that a neighbor of his planted, (in 1845,) a pumpkin-seed in every third or fourth hill of potatoes, and that the hills thus treated produced sound potatoes—"the others poor and defective." In 1846 he repeated the experiment by putting a pumpkin seed in *every* hill of potatoes. The potatoes were "fine, large and sound." He asks—"Did the shade of the pumpkin-vines preserve the potatoes, or did they draw from the soil such ingredients as were injurious to the potato?"

S. RUCKMAN, of Bath County, Va., states that potatoes did not do well in that section the past year.—"They started fair, but soon began to decay." He says he followed the plan of **WM. MCCOY**, as given in the last volume of the Cultivator, which was to use forty bushels of wood ashes and four bushels of salt to the acre; but he got only an hundred bushels of sound potatoes, where he had expected twelve hundred.

N. H. WATERBURY, of Saratoga, N. Y., gives the result of his experience in potato-culture for three years. In 1844 he planted the last of May, in rich ground. The potatoes looked well till the 20th of August, when the disease attacked them. Full one-half of the whole crop was lost, and some varieties were not worth digging.

In 1845 he planted on the first of May, on ordinary soil, without manure. The season was very dry, and the crop was light, but there was no rot.

In 1846 he planted on the 20th of April. He had a fair crop, and the potatoes were sound and good. He planted a small piece with the "Mountain Junes," manuring them in the hill. Two-thirds of these rotted. In accordance with these results, he advises to "plant warm, quick land as early as the season will admit." He states that he has tried cutting the tops, but "could never see any good effect from it."

J. PETIT, of Fredonia, N. Y., states that he has made various experiments in growing potatoes from the ball, from 1842 to 1846. The seedlings rotted as bad as others. He therefore comes to this conclusion—"that the seedling potato insures any special immunity from the rot, is out of the question. Experiments made with greater accuracy than mine, have settled this fact. The cause and the cure lie hidden still in nature's arcana."

We agree to the conclusion in regard to the non-exemption of seedlings. Nearly all the testimony we receive on this point tends to this result. Mr. **NORTON**, in his essay on the potato disease, published in the Transactions of the N. Y. State Ag. Society for 1845, observes—"great stress has been laid upon the necessity of procuring new varieties from seed;" and adds—"it is most unfortunate for those who believe this, that in the whole of the answers to the above question" [in reference to varieties raised from seed,] "there is not one favorable to their theory." Mr. N. gives extracts from the answers. One man states that he had above *sixty* varieties which had been raised on his farm within three years previous, and they had "all been attacked with the disease, and in some cases with more virulence than the older varieties—not one of the seedlings being free from disease." Another man states that he had ten kinds raised from seed two years before, and they were all affected. Several others state that they have used new varieties, and that they were as much if not more liable to disease than older ones.

ELISHA HAMMOND, of Scoharie County, N. Y., states that in 1846 he planted some potatoes in April, some "about the middle of May," and some "about the middle of June"—all on the same kind of soil. He says—"Those that I planted in June did not rot; but they did not yield one-third of a crop. Those planted in May, arrived at about two-thirds the usual size and commenced rotting, and in a few days a large portion of them were a rotten mass; but those I planted in April fully perfected their growth and remained sound." He states that he has made numerous inquiries through Schoharie county, and as far south as Suffolk county, Long Island, and the evidence is in favor of early planting with an "*early kind*." He concludes—"there appears to be a period in the early part of the season that the potato tops are not affected by the blight; and it therefore follows that early planting with an early kind insures the perfection of the tuber before the blight strikes."

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[*] "Remarks on the Potato Disease, by P. F. H. Fromberg, first Assistant in the Laboratory of the Agricultural Chemistry Association of Scotland."—[Scotish Quarterly Journal of Agriculture for January, 1847.]

Lardner Vanuxem, of Bristol, Pa., writes—"In general the rot has not been extensive in this section of the country—indeed, it may safely be said that its ravages have been but partial. So also on the opposite side of the river in New Jersey, as I have been informed, with like soil and similar position, our soil being a light loam, underlaid with sand or gravel, readily permeable to water, admitting, with few exceptions, of being plowed at all times unless frozen; the wells generally from 10 to 18 feet in depth. * * * I have no doubt that early planting is decidedly to be preferred, and is more generally practiced in this section for winter potatoes than was the case a few years ago."

H. A. Parsons, Buffalo, attributes the disease to the constitutional decline of the potato. A communication of his in reference to the subject was given in our January number, together with some editorial remarks. In those remarks we observed that the older varieties, so far as our knowledge extended, did not appear to be more subject to the disease than those lately originated, and cited the long-reds, or "merinos," known as an old variety, as being *generally* more exempt from attack than others. In relation to this, Mr. Parsons, in a communication received since the former one was published, observes—

"What you state in regard to the long-reds or merinos is not verified by my experience and observation. I raised the past summer 60 bushels of merinos, which, when dug, were remarkable clean and bright, and not a particle of disease perceptible except in one hill. They were put under a dry shed, and in three weeks the whole mass was so affected with the disease that, notwithstanding many experiments and efforts to arrest it, I did not ultimately save six bushels of sound ones out of the sixty. They rotted with amazing rapidity, and the effluvia arising from them was very offensive. I have been in the habit of examining almost daily for four months past, the potatoes brought to this city in the market wagons from the surrounding country. They come more or less from five counties, viz:—Erie, Niagara, Genesee, Wyoming and Chautauque. Every load of merinos that I have yet seen, has exhibited symptoms of the rot; and so of nearly all other varieties. Occasionally a load has been brought in that appeared fair and sound, and the answers made to my inquiries have been that they grew on new land, or were a new and extraordinarily fine variety, &c. Every load of good ones would be set off by some extra story as to the why and wherefore—implying that disease was the established rule, and health the rare exception."

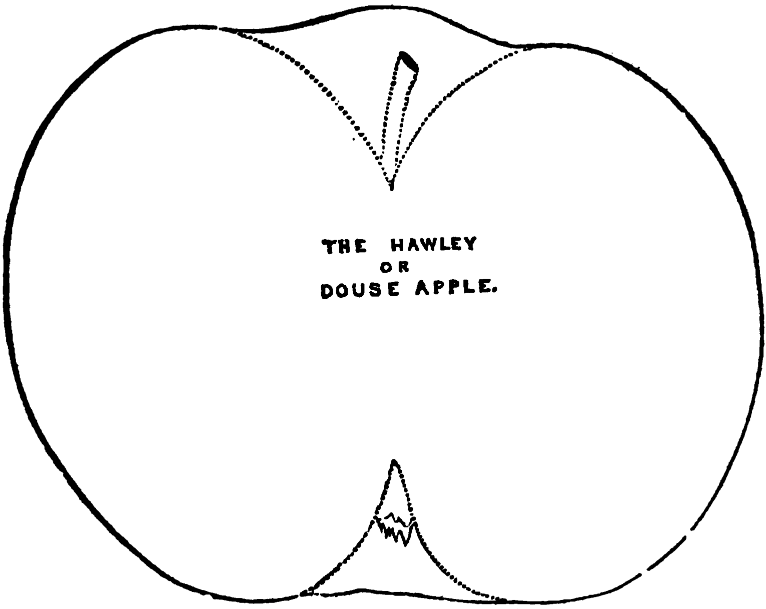
Thomas Close, of Portchester, Westchester County, N. Y., observes that the potato crop in his vicinity was visited with two distinct and separate attacks, the first occurring the last week in July, and the second about the 20th of August. We have before mentioned that the same circumstances in regard to the disease were noticed in this neighborhood, and we have heard of them in other sections. Mr. Close observes that the second attack must have been much more severe than the first, "as nearly all the earlier potatoes perished in this attack which escaped the first; while the late planted crops, which were too young to feel much of the July attack, and which continued flourishing till about the 20th of August, were then nearly all exterminated." But he states that the few potatoes which "escaped the two pestilential periods, have kept as well as if nothing unusual had happened."

Mr. Close attaches much importance to these facts. "If," says he, "they do not point us directly to the cause of the disease, they show at least that many things to which it has so often been ascribed, could have had no share in its production. A clear inference is, that whatever may have been the cause of the mischief, it must have been very sudden in its onset, and very transient in duration. * * * This seems entirely to set at rest all the conjectures respecting the agency of insects and of fungus in the production of the disease. The most fanciful imagination can form no conception of an insect attack so sudden, so overwhelming, and yet so capricious and evanescent as this must have been to accord with known facts; while the fungus, that so many have detected in the decaying tuber, is obviously an effect and not a cause of the decomposition. Nor is there any better grounds for ascribing the disease to the ordinary but ever-varying states of the atmosphere depending on temperature, or too much or too little rain. These are *ordinary* conditions, but surely it requires *extraordinary* ones to cause that to happen to the potato now, for the first time, which has never happened to it until the commencement of the present epidemic."

The conclusion to which Mr. Close arrives from all these facts and circumstances is, that the cause of the malady in question "belongs to that class of mysterious agencies to which the epidemic diseases of the animal world have always been ascribed." He thinks, however, that "though the specific cause of this malady may be unknown, or if known entirely beyond our control, it does not follow that the disease itself may not be mitigated by carefully studying the laws by which its action seems to be governed. Many observations have shown that very early planted potatoes are much less liable to the disease than later crops. In deep and moist soils, and grounds recently and freely manured from the barn-yard, the disease has been found far more destructive than on dryer or thinner soils, or where saline substances have been the fertilizers used."

Conclusion.—It will be noticed that a large portion of the communications speak of early planting as having been more successful than late, and such, with a few exceptions, is the nature of the testimony we have received during the three last years. Though we do not regard early planting as a specific against the disease, we think we are safe in recommending its adoption. There is no doubt that in this country, thus far, the early planted crops have generally succeeded best. We attribute this success solely to the crops having reached maturity, or nearly reached it, before the disease manifested itself. Had the disease occurred at such a period that the early-planted potatoes would have been in the same stage as the later-planted ones have been, at the time of their being attacked, we presume they would have fared alike. Unless the attack should occur earlier the coming season than it has in former years, we shall look for the same advantages from early planting as have been before obtained. It may be proper to remark that in Europe, so far as we can learn, no particular benefits have been derived from early planting. Fall and winter planting has been resorted to in order to have the growth of the potatoes as forward as practicable the next season; but they have fared no better, so far as regards the disease, than others. The reason is the attack has occurred there at an earlier stage of the plant than it has here. At what precise time it may appear the coming season is more than any one can tell. Its appearance last year was considerably earlier than in any former one; still, judging by the past, we are decidedly of the opinion that early planting is safest in this country.

THE ORCHARD AND THE GARDEN.



Of all the varieties of the apple which have lately been brought to notice, probably none is destined to become more and deservedly popular than the Hawley or Dowse. This and the Fall Pippin, are nearly the only apples of the largest size, which prove of first rate quality, or which are not cultivated chiefly for their showy appearance. It is superior to the Fall Pippin in the fairness of its fruit, and is generally regarded as preferable to that fine variety, by those acquainted with both.

Its precise origin appears at present to be unknown. Its cultivation is chiefly confined to Tompkins county, and the south part of Cayuga county, in western New-York. Specimens were exhibited at the State Fair at Auburn, by E. C. Frost, of Catharine, Chemung Co. It is said that the original name was Hawley, but was changed to that of Dowse, from the name of the grafter who introduced it, and by which it is now generally known.

Description.—Very large, nearly round, slightly flattened, somewhat irregular, and slightly ribbed; yellowish green, usually passing to pale yellow when ripe; stalk slender, three-quarters to an inch long, set in a wide deep cavity, and usually scarcely projecting to the rim; calyx in a narrow and rather deep, regular, and somewhat furrowed depression, though sometimes but slightly sunk; flesh of fine texture, very tender, subacid, and of excellent flavor. It ripens from the first to the middle of autumn. The tree in the nursery is of moderate growth, but in the orchard it forms a well-spread and good shaped tree, and produces good crops every year. T.

MANAGEMENT OF FRUIT TREES, &c.

Seasonable Hints.

Orchard Caterpillars.—Take them early, and their destruction is easy; let them flourish for a while, and the labor is greatly increased. Early in the month, their eggs will be found in nests or belts encircling the young shoots, and near their extremities; and at a few feet distance appear like small knobs on the branches. They are now quickly clipped off and burned; every one thus removed preventing a large nest of caterpillars. As soon as the buds begin to open, they hatch; and remaining for a few days on their small nests, give them a conspicuous downy appearance. At this period they may be easily destroyed, but soon after, if left, they increase rapidly in size and in their depredations.

Preparing for Transplanting.—Those intending to set out new orchards or fruit gardens, should have the ground well prepared in season, by digging ample holes, and in preparing the soil in the best manner. Let the holes be six or seven feet across, and all the outer portions, or those not to be in immediate contact with the roots, filled beforehand, if convenient, with old rotted manure thoroughly mixed with soil. This will give the young trees a vigorous start, until they come into bearing; and in the mean time the whole ground should be gradually enriched by manuring the crops. It would be still better, if the ground for the young orchard could be well prepared for two years previously, in the following manner :—First, run the subsoil plow as deeply as possible, to loosen the soil for the entrance of the common plow for trench-plowing. This will work the manure deeply below the surface, which the subsoil plow will not do, and will intermix thoroughly surface soil, subsoil, and manure. Two years of such treatment, with crops of carrots or other roots, will bring the land to the finest order, and even one year would be eminently useful.

Young Fruit Trees, which lack vigor of growth from too poor a soil, should be stimulated with a good coating of old manure spread round them and spaded in as soon as the frost leaves the ground. All fruit trees, except of the largest size, which do not stand in ground kept constantly cultivated by the hoe, should have the soil for several feet, kept well spaded round them. Soapsuds, especially for peach trees, are fine.

Trees in Bud, which were inserted last summer, should be headed down to the bud, that it may grow freely by receiving all the sap. To cause the new shoot to grow straight, leave two or three inches of the stock above it, to which the shoot is to be closely tied, to remain till mid-summer, when the stump is to be pared closely to the bud. Many buds are lost by heading down too closely in the spring,—the drying of the wood below the fresh wound causing their death.

Raspberries.—These should be pruned as early in spring as practicable. All the old stems, and all the smaller young shoots should be cleared away to the ground; and about half a dozen largest stems of last year's growth reserved for bearing. Their upper extremities for a foot or two, should be cut off, being weak and useless, and detrimental from their weight and shade. The remaining stems, if not of a stiff and upright variety, should be loosely tied to stakes.

Tender Grapes, Strawberries, and **Shrubs**, which were covered for protection, should, have the covering removed. T.

SELECTION OF THE BEST PEARS.

The most striking feature in the progress of fruit culture, is, perhaps, the improvement in the variety of our pears. A large number of new and fine sorts have lately originated or become known; and hundreds of foreign ones are under a course of examination. A single orchard in Massachusetts, has no less than eight hundred different varieties.

And this fine fruit is indeed worthy of the attention it receives. Generally adapted by its hardiness, to the northern states; scarcely ever losing a crop by frost; and only second to the apple in productiveness, and greatly excelling it in melting and delicious flavor, it fills a most important place in all good gardens.

The only truly formidable disaster to which it is liable, the fire blight, is becoming better understood and more easily managed. Instant excision and burning the branches, have proved entirely effectual where it has been properly and unremittingly performed. This remidy has,however, failed in most attempts, partly from being too long delayed or not perseveringly pursued; but more frequently from not cutting far enough below the affected part. Most cultivators are content to cut off the *visibly* affected parts only; whereas, at least two or three feet of the branch below should also be taken, as the poison extends downwerds, and does not instantly show itself.

Selection of Varieties.—A. J. Downing says, "The most successful cultivator of pears in this country, whose collection comprises hundreds of varieties, lately assured us, that if he were asked to name all the sorts that he considered of *unvarying and unquestionable excellence*, in all respects, he could not count more than *twenty*." But perhaps there is no fruit where different cultivators would more differ in opinion than in this. The peculiar qualities constituting excellence, are greatly disposed to vary in some, and seem to be in many cases very singularly, strangely, and partially distributed among some of the finer sorts. For instance, that most superlatively rich and high-flavored variety, the Seckel, is of quite small size, and slow in growth. The Virgalieu, which in many localities, stands as the first, all things considered, is in others perfectly worthless. It may, however, be said, that the pear, which all good judges pronounce as first rate, must be really fine. Such pears are indeed very few.

Last autumn, when A. J. Downing was at Boston—the focus of intelligence on this subject—he inquired of a number of the most experienced cultivators there, *which do you consider the* THREE *best pears*—early, middle, and late—supposing yourself confined to three trees? In answer, for the best early pear, *five* of the persons asked, named the *Bartlett*, and *one* the *Bloodgood*. For the middle one, (the field for selection being here much the widest,) two chose the *Vicar of Winkfield*, one the *Louise Bonne de Jersey*, one the *Fondante d'Automne*,* one the *Beurre Bosc*, and one the *Seckel*. For the third or late variety, there were three votes for the *Winter Nelis*, and three for the *Beurré d'Aremberg*. A. J. Downing, in summing up, gives his voice for the *Bartlett* and *Beurré d'Aremberg*, for the early and late; and for the middle, at the east and south, the *Seckel*, and at the north and west, the *White Doyenné*, (or Virgalieu.*) The whole number here selected is *ten* varieties,—all of which may therefore be regarded as eminently valuable,—some having several voices in their favor, and others only one. *Six* chose the Bartlett, *four* the Beurré d'Aremberg, *three* the Winter Nelis, *two* the Vicar of Winkfield, *two* the Seckel, and *one* each the Bloodgood, Louise Bonne de Jersey, Beurré Bosc, Fondante d'Automne, and White Doyenné. It appears singular that only a single summer variety should have been selected. the Bloodgood, and that the Vicar of Winkfield, decidedly a winter fruit, should have been placed by two persons as the "middle" variety.

There are a few others which other cultivators would regard as fully worthy of being classed with the above. *Van Mons' Leon le Clerc* has been pronounced by high authority as the best of all pears; yet Downing thinks the *Onondaga* or *Swan's Orange* likely to prove superior, and a cultivator well acquainted with fine fruit, said that if he were confined to *one* variety, he would unhesitatingly choose Swan's Orange. The writer thinks he certainly never tasted a finer pear, all things considered, than the *Doyenné Gris*. For the best very early pear, ripening at usual wheat cutting, or even sooner, the *Madeleine* stands alone; while the *Bloodgood* is undoubtedly unrivalled as its next successor. T.

TRANSPLANTING PEACH TREES.

A writer in the Horticulturist, thinks it is not advisable to transplant peach trees the first year after budding. This was once my opinion; but I have found that trees planted in the spring, that had been budded the previous fall, did better than if left one year longer. They are more certain of growth, and transplanting them makes little or no difference in the growth. I transplanted some last spring, in the latter part of April or the beginning of May, that have grown more than six feet high. I was first led to this practice from a nurseryman, to whom I applied for some trees, and I thought it at first, nothing more or less than an excuse to sell me the young trees, as he had no older ones of the sort I wanted. But I have found by experience that it is the best way, and all that a person has to do is to take care that they have *living buds*, not what is called by some dormant ones. In a lot that I planted out last spring, I believe I had but one which missed, though I had 3 or 4 that did not start till late, but they made nearly three feet. A. A. Mullett.

Springfield, Hamilton Co., Ohio.

SOWING FLOWER SEEDS.

Complaints are very frequent of failure in the vegetation of flower seeds, and the seedsmen often receive abundant censure, when the fault is in the mode of sowing. Minute or rare seeds, if merely buried beneath common soil, can hardly be expected to grow. An experienced cultivator says "their failure to grow in common gardens, I should scarcely consider as any proof that the seeds were bad."

"But," asks the inquirer, "if seeds are *not* to be buried beneath the soil, in what possible way are they to be treated?" Follow nature—not servilely, but rationally—imitate her successful operations, not her failures—adopt such points of treatment as are essential,—without blindly copying everything, as the Chinese tailor did, when he made a new coat with a patch on the sleeve from the worn pattern given him.

Seeds which drop in the forest are never covered deeply, but they are deposited on the surface of a bed of fine mould, and afterwards covered with a very thin coat of partially decayed vegetable matter. Flower seeds should have only a thin sprinkling of fine mould upon them. The seeds in the forest are kept moist by a shade. Fine seeds must be protected from the scorching rays of the sun, till they have obtained sufficient foothold. A friend is very successful with such seeds, by screening them, after sown, with small boxes open at the bottom and top, across which a piece of fine muslin is stretched, like a sieve. Light is thus admitted, the drying of winds is prevented, the hot solar rays are much softened, and insects excluded. This treatment will ensure success with many delicate seeds where ordinary modes would fail.

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* This variety, obtained by the writer from R. Manning, has not yet proved of excellent quality in Western New-York It may do better in future, and its failure may have been from some unusual and unknown causes.

* Horticulturist.

The watering of common soils, by rain or by artificial means, soon forms a thin crust on the surface, unless such soils are of the lightest character, and delicate young plants cannot push through it. The difficulty is obviated by the substitution of peat or fine mould, sifted over the surface when the seeds are sown.

Dr. Lindley says, "When the acorn falls, it has no power of wrigling into a hole in the ground, and when the chickweed scatters its tiny seeds, they lie and grow where they fall." This eminent horticulturist describes a method which can hardly fail with any seeds of temperate climates, which retain vitality. First, provide a good soil, fine and dry; smooth the surface; sift over it a coat of fine mould or peat if the seeds are very small; or mix them with the same material before sowing, if excessively minute. Then press the whole surface gently and evenly. Next sprinkle over the surface some coarse moss, previously soaked in boiling water to kill insects or eggs, and with the superabundant water pressed out. Cover the whole with a common garden pot, and lay a tile on the hole. The seeds are then planted—the moss answering the purpose of the scattered forest leaves in nature, and the pot supplying the shade.

Then, judging from a daily inspection by looking under the pot and moss coating,—open the hole in the pot when the seeds *begin* to grow; the next day, perhaps, remove a part of the moss; the next, raise the pot by a stone under its edge; then gradually raise the pot higher, remove the rest of the moss, and finally take the pot away.

One caution should be added for those who plant large seeds encased in a dry shell, as for instance the horse-chestnut. In the wild state they drop as soon as ripe into moist mould where they remain till germination commences. If packed up and kept dry a few weeks, they will scarcely ever grow. No difficulty of this kind will however occur if they are packed in moderately moist muck from the woods as soon as mature. T.

HORTICULTURAL GLEANINGS.

[*Condensed from "The Horticulturist" and other works.*]

SIX BEST APPLES.—B. V. French, of Braintree, Mass., who has probably given as much attention to the culture and examination of the different varieties of the apple, as any other person in the state, has given the following list of such varieties as stand first for productiveness, fair habit of growth, adaptation to the climate, and fine quality, and affording a succession in ripening: *Early Harvest*, *Porter*, *Fameuse*, *Rhode Island Greening*, *White Seeknofarther*, and *Baldwin*.

FINE MARKET PEAR.—The *Vicar of Winkfield* is remarkably distinguished for its large, fair, and handsome form, and for its extraordinary productiveness; and though only of second rate flavor, it must prove a valuable market variety. Though spoken of as "middle" or autumn variety in "*Downing's Pomological Gossip*," it is evidently an early winter fruit, which must increase its value for distant transportation. Hovey, in his Magazine, speaks of a tree of this variety in the grounds of O. Johnson, of Lynn, as being "literally loaded, and the branches so heavy as to require propping up to prevent their breaking from the weight of the fruit—the tree has borne abundantly every year since it first began."

THE MADELEINE PEAR, or Citron des Carmes, was stated last year by the Committee of the Massachusetts Horticultural Society, to be the best of any of its season, among all the numerous new varieties. Among the numerous localities where this pear has been well tried, we never heard of but one where it did not prove valuable, and that was at Auburn, Cayuga Co., N. Y. It sometimes rots at the core, which may be prevented by ripening in the house; and where it does not prove fine, its quality may doubtless be much improved in this way. The *Jargonelle*, so liable to core rotting, is greatly improved by ripening in this manner, as well as nearly all other pears.

THE BEST TWO STRAWBERRIES, adapted to extensive culture for market, are, according to the opinion of A. J. Downing, *Hovey's Seedling* and *Black Prince*.

SELECT VARIETIES OF ROSES.—Dr. Valk, of Flushing, who has much knowledg of Roses, gives select lists in the Horticulturist, from T. Rivers, the greatest English rose culturist, which may greatly assist those in selection, who are not familiar with the one or two thousand varieties, offered for sale by nurserymen:—

The six sweetest—*Prince Albert*, *Crimson Perpetual*, *Common Moss*, *Old Cabbage*, *Crested Provence*, & *Riego*.

Six finest *large* varieties—*La Reine*, *William Jesse*, *Souvenir de la Malmaison*, *Calypso*, *Brennus*, and *Chenédolé*—two hybrid perpetuals, one Bourbon, and three hybrid Chinas.

Six most vigorous growing—*Charles Duval*, *Chenédolé*, *Elise Mercœur*, *Great Western*, *Hortensia*, and *Paul Perras*—five Hybrid Bourbons, and one Hybrid China.

Six earliest *large* roses—*Blairié, No. 2*, *Fulgens*, *George 4th*, *Magna Rosa*, *Ne plus ultra*, and *Triomphe d'Angiers*—all hybrid Chinas.

Six earliest *small* roses—*Burgundy*, Chinese Sweet Brier, Persian Yellow, *Rose de Meaux*, *Moss Pompone*, and *Sponge's Rose*.

Six finest forms—*Boule d'Anteuil*, *Coupe d'Hebe*, *Kean*, *La Voluptu*, *Rose Devigne*, and *Triomphe de Jaussens*.

PLANTS IN THE SHADE.—J. Jay Smith, of Philadelphia, gives the following list of plants which thrive well under the shade of trees:—All *Rhododendrons and Kalmias*, *English Ivy*, *Ilex aquifolium, and I. opaca*, *Acuba japonica*, *Box*, *Yew*, *Mezereon*, *Privet*, *Red Dogwood*, *Snowberry*, *common Juniper*, *Lily of the Valley*, *Periwinkle*, *Saxifraga umbrosa*, *Monarda didyma*, *Anemone pennsylvanica*. The same cultivator, having been remarkably successful in the cultivation of the rose, attributes his success to a remark he had seen on their management, that they require "to have their feet kept dry;"—that is a deep and well drained subsoil.

CULTIVATING FRUIT TREES.—So great is the loss resulting from stunted and diseased growth, occasioned by neglected cultivation, that an intelligent cultivator gave it as his opinion, that "if nine-tenths of our orchards should be cut down, and the labor and cultivation which they receive be expended on the remaining tenth, *more* and *better* fruit would be raised."

THE ROXBURY AND PUTNAM RUSSETS.—A. J. Downing, after a careful examination of specimens, of the latter, from the original Putnam orchard in Ohio; of the former from Roxbury and Dorchester; and of both from other sources; as well as comparing the growth of the trees,—has fully concluded that these celebrated varieties are identical.

FAILURE OF FRUIT.—Dr. Barratt, of Middletown, Ct., says that a series of observations, have led him to the conclusion, that continued or heavy rains, at the time the trees are in full flower, often causes a failure of the crop, when this failure can be ascribed to nothing else, the rain washing away the pollen, and preventing the fertilization of the germs. T.

AGRICULTURAL SOCIETIES.

ANNUAL EXHIBITION
OF THE
NEW-YORK STATE AGRICULTURAL SOCIETY,
To be held at Saratoga Springs, Sept. 14, 15, *and* 16.

☞*The first day to be devoted exclusively to the examination by the Judges of the Animals and Articles exhibited, and no persons will be admitted within the enclosure on that day, but the Officers of the Society, Judges, and Exhibitors.*

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List of Premiums for 1847.

ON FARMS.

For the best cultivated farm of not less than fifty acres, exclusive of wood-land and waste land, regard being had to the quantity and quality of produce, the manner and expense of cultivation, and the actual profits—First premium, $50—2d do. $30—3d do. $20.

☞ Applicants for these premiums will be required to furnish written answers to a series of questions, copies of which may be obtained, by addressing the Secretary, B. P. Johnson, Esq., at Albany.

EXPERIMENTS AND ESSAYS.

Stall-Feeding Cattle.—Best experiment in stall-feeding cattle or sheep. A full and detailed statement will be required. 1st. Weight and age of animal when feeding commences. The weight weekly during the process. 2d. The kind and exact quantity of feed and its value. 3d. The weight when slaughtered, and the price at which sold, and the account of profit and loss. 4th. Any other particulars that may be of importance to a full and complete account of the whole process, ... $20

Draining.—Best experiment in draining. 1st. Statement of the situation of the land previous to the commencement of the process—the kind and condition of soil. 2d. The method pursued, with a particular account of the expense. 3d. The result and increased value of the land, if any,.................................... $10

Top Dressing Grass Land.—Best experiment. 1st. Situation of land and of soil. 2d. The kind, quantity, and value of the manure used. The manner of its application. 3d. The results, giving the increased product, &c. To be answered in 1848, ... $20

Root Crops.—Best experiment on not less than half an acre. 1st. State of land previous to crop, and how manured. 2d. The kind, quantity, and value of manure applied, and in what manner. 3d. The kind of soil and the manner of cultivation, with a detail of the expense. 4th. The result, ... $10

Experiments in Fattening Animals on Indian Corn to test its value for that purpose.

ON PIGS.

1. Lot of 10 pigs of about 100 lbs. weight each, in lots of 5; to be shut up between the 20th November and 20th December, and weighed separately when put in—the weight to be registered, as well as the sex, breed, and general characteristics of the pigs, and arrange them in the pen by sex, age, and size; to be fed on Indian corn alone.

2. Weigh a quantity of Indian meal, and feed it at regular hours—to be cooked and fed two weeks, and the corn dry two weeks, alternating the feed every two weeks.

3. Have the pigs kept clean.

4. At end of two weeks weigh each pig and enter its weight, and make an account, to be entered, of how much all have gained, and upon how much feed.

5. At the end of each succeeding two weeks perform the same process, and continue to do so for at least 12 weeks, and sum up the entire gain, quantity, and value of the feed. the market value of the pork, and where marketed, at the time each of the pigs is slaughtered and disposed of:

A premium of $25

For experiments in fattening the like number of pigs, under the same regulations as above, *on any other kind of grain or vegetables*,.................................... $25

The statements required, and everything connected with the experiment in each case, to be verified by the affidavit of the owner, and at least one other person.

FARM DWELLINGS, &c.

For the best design, accompanied with plans, elevation, and cost of construction, combining convenience, economy, and good taste,.................................... $20

For the best design, accompanied with plans and cost of construction of a piggery, ... $10

For the best design of a farm barn, with plans and cost of construction, and out-buildings,.................................... $15

Competitors for the above premiums must forward their manuscripts to the Secretary previous to the 1st of December, 1847, free of postage.

The above premiums for experiments and essays will be open to citizens of other states, as well as residents of this state.

PREMIUMS ON CHEESE DAIRIES FOR 1847.

The number of cows not less than 20. B. P. Johnson, Ch'n Com.

Special,....................................	$50
First premium,....................................	50
Second premium, ...	30
Third premium, ...	20

ON BUTTER DAIRIES.

The number of cows not less than 20. Hon. R. Denniston, chairman of committee.

First premium, ...	$30
Second premium, ...	20
Third premium,....................	10

☞ Persons applying for the premiums on Cheese and Butter Dairies, must furnish answers to a series of questions, copies of which can be obtained by addressing B. P. Johnson, Esq., Albany.

PREMIUMS ON CATTLE.

CLASS I.—Durhams.

Best bull, 3 years old,......	$20	Best cow, 3 years old,......	$20
Second best,................	15	Second best,................	15
Third best, ...	Am. Herd Book.	Third best, ...	Am. Herd Book.
Best 2 years old,...........	15	Best heifer, 2 years,........	15
Second best,................	10	Second best,................	10
Third best, ...	Am. Herd Book.	Third best, ...	Am. Herd Book.
Best year old bull, ...	10	Best year old heifer, ...	10
Second best,................	5	Second best, ...	5
Third best, ...	Am. Herd Book	Third best, ...	Am. Herd Book.
Best bull calf,..............	5	Best heifer calf,............	5
2d do.,...	Washington's Letters.	2d do.....	Washington's Letters.

CLASS II.—Herefords.

Best bull over 3 years old,..	$20	Best cow, 3 years old,......	$20
Second best,................	15	Second best,................	15
Best bull between 1 and 3 years old,................	15	Best heifer between 1 and 3,	15
Second best,................	10	Second do.,................	10
Best bull calf,......	5	Best heifer calf,............	5
Second best, ...	Wash. Letters.	Second best, ...	Wash. Letters.

CLASS III.—Devons.

Best bull, 3 years old,......	$20	Best cow,..................	$20
Second best,................	15	Second best,................	15
Best bull between 1 and 3 years old,................	15	Best heifer between 1 and 3 years old,................	15
Second best,................	10	Second best,................	10
Best bull calf,..............	5	Best heifer calf,............	5
Second best,....	Wash. Letters.	Second best,....	Wash. Letters.

CLASS IV.—Ayrshires.

Best bull, over 3 years old, .	$20	Best cow,..................	$20
Second best,................	15	Second best,................	15
Best bull between 1 and 3 years old,................	15	Best heifer between 1 and 3 years old,................	15
Second best,................	10	Second best, ...	10
Best bull calf, ...	5	Best heifer calf,............	5
Second best,....	Wash. Letters.	Second best, ...	Wash. Letters.

CLASS V.—Crosses, Natives, &c.

Best cow, over 3 years old,.	$20	Best yearling heifer, ...	10
Second best,................	15	Second best, ...	5
Third best,................	10	Third best,.........	Vol. Trans.
Best 2 year old heifer,......	15	Best heifer calf..............	5
Second best,................	10	2d best heifer calf, .	Wash. Lett.
Third best 2 years old heifer,	$5		

Working Oxen.

Best team of 20 yoke from any one county,......	$25	Largest No., not less than 10 yoke of oxen from any one town, ...	$20
Second best,................	15	2d largest,..................	10
Best yoke of oxen,.........	15	3d largest, ...	Col. Tour.
Second best,................	10		
Third best yoke, ...	Vol. Trans.		

Three Year Old Steers.

Best Yoke, ... $10 | Second best,................ $8

Third best, ...Vol. Trans.

Best team of 10 yoke from any one county, ... $15

To boys, between the ages of 16 and 20, inclusive, who shall exhibit the best broke yoke of 3 year old steers, of their own training,.... .... Col. Tour.

Second best do., Wash Letters. | Third best, do,...... Vol. Trans.

Two Year Old Steers.

Best yoke,................ $10 | Second best, ... $5

Third best, ... Vol. Trans.

To boys under 16 years of age, who shall exhibit the best broke yoke of 2 year old steers, of their own training,...... Col. Tour.

Second best,.... Wash. Letters. | Third best,........ Vol. Trans.

Yearling Steers.

Best yoke,................ $8 | Second best, ... $5

Third best, ... Vol. Trans.

To boys under 16 years of age, who shall exhibit the best broke yoke of yearling steers of their own training, ... Col. Tour.

Second best,.... Wash. Letters. | Third best, ... Vol. Trans.

In awarding the premiums on working oxen and steers, the single teams will be subjected to a trial on a loaded cart or wagon under the direction of the committee; and particular reference will be had to the matching, training, and docility of the animals, as well as their general appearance.

Fat Cattle.

Best pair fat oxen,	$15	Second best,	$10
Third best,	Colman's Tour.		
Best ox or steer,	$10	Second best,	$5
Third best,	Vol. Trans.		
Best fat cow or heifer,	$10	Second best,	$5
Third best,	Vol. Trans.		

A fat ox taking a premium as one of a pair, cannot compete singly for another premium.

Fat Sheep.

Best fat sheep,	$10	Second best	Col. Tour.
Third best,	Vol. Trans.		

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity, and cost of the food.

Best Milch Cow.

The cow to be kept on grass only during the experiment, and for 15 days previous to each period of trial,........................ $20

The time of trial, from 10th to 20th of June, and from 1st to 10th of September.

Statement to be furnished, containing

1st. The age and breed of cow, and time of calving.

2d. The quantity of milk in weight, and also of butter, during each period of ten days.

3d. The butter made, to be exhibited with the cow, at Saratoga, and the statement to be verified by the affidavit of competitor, and one other person conversant with the facts.

HORSES.

CLASS I.—For all work.

Best stallion ver 4 y'rs old,	$15	Third best,	Youatt, on Horse.
Second best,	10	Fourth best,	Vol. Trans.
Best brood mare, (with foal at her foot,) for all work,	$15		
Second best,	$10	Third best,	Youatt
Fourth best,	Vol. Transactions.		

CLASS II. Draught.

Best stallion over 4 y'rs old,	$15	Third best,	Youatt.
Second best,	10	Fourth best,	Vol. Trans.
Best brood mare, (with foal at her foot,)	$15		
Second best,	$10	Third best,	Youatt.
Fourth best,	Vol. Trans.		

CLASS III.—Blood.

Best stallion over 4 y'rs old,	$15	Third best,	Youatt.
Second best,	10	Fourth best,	Vol. Trans.
Best brood mare (with foal at her foot,)	15		
Second best,	$10	Third best,	Youatt.
Fourth best,	Vol. Trans.		

Three Year old Stallions.

Best 3 years old stallion,	$10	Third best,	Youatt.
Second best	5	Fourth best,	Vol. Trans.
Best mare 3 years old,	10	Second best,	$5
Third best,	Youatt.		

Geldings and Matched Horses.

Best Gelding,	Diploma.	Second best,	Youatt.
Best pair of matched horses,	$8 and Diploma.		
Second best,	$5	Third best,	Vol. Trans.

SHEEP.

CLASS I.—Long Wooled.

Best buck.	$10	Best 5 ewes,	$10
Second best,	5	Second best,	5
Third best,	Am. Shepherd.	Third best,	Am. Shepherd.
Best pen 5 lambs,	$5		

CLASS II.—Middle Wooled.

Best buck,	$10	Best 5 ewes,	$10
Second best,	5	Second best,	5
Third best,	Am. Shepherd.	Third best,	Am. Shepherd.
Best pen 5 lambs	$5		

This class includes the South Down, Norfolk, Dorset, Native, &c.

CLASS III.—Merinos and their Grades.

Best buck,	$10	Best 5 Ewes,	$10
Second best,	5	Second best,	5
Third best,	Am. Shepherd.	Third best,	Am. Shepherd.
Best pen 5 lambs,	$5		

This class includes all those generally denominated Merinos, whether of pure or mixed blood.

CLASS IV.—Saxons and their Grades.

Best buck,	$10	Best 5 ewes,	$10
Second best,	5	Second best,	5
Third best	Amer. Shepherd.	Third best,	Am. Shepherd.
Best pen 5 lambs,	$5		

This class includes all those generally denominated Saxons, whether of pure or mixed blood.

When sheep are presented for premiums unshorn, evidence will be required of the age of the fleece.

SWINE.—Large Breed.

Best boar, 2 years old,	$10	Best sow, 2 years old,	$10
" " 1 year old	8	" " 1 year old,	8
" " 6 mos. and over,	5	" " 6 mos.,	5

This includes Cheshire, Berkshire, Russia, Mackay, Leicester, and their grades.

Small Breed.

Best boar, 2 years old,	$10	Best sow, 2 years old	$10
" " 1 year old,	8	" " 1 year old,	8
" " 6 mos.,	5	" " 6 months,	5

This class includes Neapolitan, Suffolk, Improved China, Chinese, Mocko, and their grades.

Best lot of pigs not less than 4 in number, under 10 mos,	$5
Second best, " " "	Vol. Trans.

In awarding premiums on hogs, reference will be had not merely to present condition, but to that proportion between bone and meat which promises the greatest value from the least amount of feed.

POULTRY.

For the best lot of Dorking Fowls, not less than 3, 1 cock and 2 hens,	$2	and Am. Poulterers' Companion.
Best lot of Black Poland, not less than 3,	$2	and Am. P. Comp'n.
Best lot of large fowls, not less than 3,	2	"
Best pair of ducks,	2	"
Best pair of turkies,	2	"
Best pair of geese,	2	"
Best and greatest variety of barn-yard fowls owned by the exhibitor,	$5	and Am. Poulterer's Companion.

PLOWS.

Best plow possessing some new and valuable improvements,	$10	and Diploma.
Best subsoil plow,	10	"
Best scarifier,	10	"
Best roller for general use,	5	"
Best clod crusher and roller,	5	"

WAGGONS, HARROWS, &c.

Best farm wagon,	$10 and Dip.	Best Corn Stalk Cut.,	$5 and Dip.
Second best,	Col. Tour.	Second best,	Trans.
Best Harrow,	$3	Best Threshing Ma ,	$10 and Dip
Best Cultivator,	3	Second best,	Trans.
Best Fanning Mill,	$5 and Dip.	Best Drill Barrow,	$3 and Dip.
Second best,	Trans.	Best Straw Cutter,	3 and Dip.
Best Horse Power,	$5 and Dip.	Second best,	Trans.
Second best,	Trans.		

FARM IMPLEMENTS, &c.

Best Corn and Cob Crusher, by horse power,	$5 and Dip.
Second best	Colman's Tour.
Best Clover Machine,	$5 and Dip.
Second best,	Col. Tour.
Best Flax and Hemp Dresser,	$5 and Dip.
Second best,	Col. Tour.
Best Horse Cart, for farm,	$3
Best Ox Cart,	$5
Best Horse Rake,	$2 and Dip.
Best Ox Yoke,	Diploma.
Best Farm Harness,	"
Best Saddle,	"
Best Grain Cradle,	"
Best 6 Hand Rakes,	"
Best 6 Hay Forks,	"
Best 6 Grass Scythes.	"
Best 6 Cradle "	"
Best 6 Dung Forks,	"
Best 6 Axes,	"
Best Hay Rigging,	"
Best lot Grain Measures,	"
Best lot Butter Tubs and Firkins,	"
For the best and most numerous collection of Agricultural Implements,	$10 and Diploma.
Also, for the best and most numerous collection of Agricultural Implements, manufactured in the state of New-York. by or under the supervision of the exhibitor,	$10 and Dip.

PLOWING MATCH.

First premium,	$15	Third premium,	$10
Second "	12	Fourth do.	Col. Tour.
Fifth,	Vol. Transactions.		

For boys under eighteen years of age.

First premium,	$10	Second premium,	$5
Third,	Vol. Transactions.		

BUTTER.

For the best lot, (quality as well as quantity considered,) made from 5 cows in 30 successive days,—25 lbs. of the butter to be exhibited.. $25

Second best,	$15	Best 50 pounds made at any time,	$15,
Third best,	$10	Second best,	$10
Best 25 lbs. made in June...	$10	Third best,	Col. Tour.
Second best,	Col. Tour.	Fourth best,	Sil. Medal.
Third best,	Vol. Trans.	Fifth best,	Vol. Trans.

CHEESE.

One year old and over.

Best 100 lbs.,	$15	Third best,	Sil. Medal.
Second best,	10	4th best,	Wash. Lett.
Fifth do.,	Vol. Trans.		

Less than one year old.

Best 100 lbs.,	$15	Third best,	Sil. Medal.
Second best,	10	Fourth best,	Wash. Letters.
Fifth best,	Vol. Trans.		

(*To be concluded next month.*)

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NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee, held at the Society's Rooms, March 11, 1847, there were present—GEORGE VAIL, President; Samuel Cheever, C. N. Bement, Vice-Presidents; J. McD. McIntyre, Treasurer; B. P. Johnson, Rec. Sec'y.

Letters were read from C. Lee, Yates Co.; T. B. Wakeman, Sec'y American Institute; R. Hadfield, Sec'y Erie Co. Ag. Society; Henry Brewer, Tompkins Co., L. F. Allen, Buffalo, with report on Fruit; J. L. Randall, Lysander; E. W. Bateman, late President Cayuga Co. Ag. Soc.; Wm. Ottley, Phelps; A. G. Carl, Secretary Queens Ag. Soc.; J. B. Dill, Auburn; Myron Adams, East Bloomfield, with suggestions as to statements for field crops, &c.; Geo. Geddes, Fairmount, in relation to experiments with Indian corn, to ascertain its value for fattening animals, &c.; A Loomis, Secretary Herkimer Co. Ag. Soc.; Pennock & Pierce, Chester Co., Penn.; H. Mesier, Sec'y Dutchess Co. Soc.; A. L. Fish, Herkimer Co., in relation to the analysis of soils and grasses, and the testing of the qualities of milk of different cows for dairy purposes. [the Sec'y was directed, after consultation with Prof. Emmons, to answer inquiries;] James M. Ellis, Onondaga; H. S. Randall, Vice-President; A. Holmes, Sec'y Niagara County Soc.; Josiah Tatum, Ed. Farmers' Cabinet, Phil'a.; A. Anderson, Sec'y Fulton and Hamilton Co. Soc.; E. C. Frost, Vice-President, expressing his deep interest in the prosperity of the Society, and his regret at being unable to attend the regular meetings of the Board.

The Nos. of Farmers' Cabinet, Philadelphia, for 1846 and 1847, as far as published, were recived from Publisher, and the American Journal of Agriculture and Science, from Proprietor; the thanks of the Board were voted to the donors.

Thomas R. Allen's Bee Cultivator, containing the history and management of the bee, was presented by the author, and the Secretary was directed to furnish Mr. Allen with a certificate: That, in the opinion of the Executive Committee, his treatise contains a large amount of valuable information upon the management of the bee, and that they consider his work deserving of encouragement and extensive circulation.

Fruit.—The following resolution was adopted for the government of the committees on fruit:

Resolved, That the work entitled "*The Fruits and Fruit Trees of America*," by A. J. Downing, be the established authority of the N. Y. S. Ag. Society, in classifying the varieties and nomenclature of fruits at our future exhibitions.

A. J. Downing, of Newburg, J. W. Bissell, of Rochester, were added to the committee on fruit, appointed under the resolution of last year, and continued at the last annual meeting. The other members of the committee are, Lewis F. Allen, of Buffalo, chairman; Hon. Samuel Young, of Saratoga; and Doct. Herman Wendell, of Albany.

The President stated that he had, in company with the Secretary, visited Saratoga Springs, at the request of gentlemen of that place, and had examined various locations proposed for the show grounds for the fair, in September; that several of these were in the highest degree eligible, and that advice had been given to the members of the executive committee there, as to the location which was most desirable.

The Secretary reported the Premium List, as published, and was authorized to procure 250 copies of the same for distribution. The amount of cash premiums, $3,004; 131 volumes of agricultural works; 65 volumes Transactions; 59 diplomas, and 15 silver medals; amounting in all to $3,472.

The Secretary reported that he had received returns from 39 county societies, and that their reports were in many cases, of very great interest, and that all reports received had been prepared for the Transactions. Only 7 societies from which reports had not been received—and that he was in correspondence with the officers of these societies, and expected returns from them all. Only 12 counties in the state in which there are not organized societies.

From these reports it appears that in 19 counties, the yield of Indian Corn exceeds 80 bushels to the acre; in 11 counties, crops are reported exceeding 100 bushels. The largest yield in—

Cortland county, of	....	154	bushels.
Oswego	"	146⅞	"
Orange	"	139	"
Tioga	"	125	"
Oneida	"	123½	"

The largest yield of wheat, is from Ontario, a fraction short of 60 bushels per acre, on upwards of 3 acres.

In eight counties, the yield of oats exceeded 70 bushels per acre. The largest yield, 102 bushels, in Oneida.

A premium of $5 awarded to Jesse Babcock, of Volney, Oswego county, on barley, 54 bush 8 lbs. per acre.

To Henry Brewer, of Enfield, Tompkins county, a premium of $10, for best two acres of clover seed, 5⅛ bush. per acre.

Satisfactory reasons were given to the committee as to the delay attending the production of the papers in the above cases at the annual meeting.

A letter was read from L. T. Marshall, Cor. Sec'y of the Vernon Town Agricultural Association of Oneida county, giving an account of the organization of the association, in December, 1845, and of its progress during the year. A Fair was held in the fall of 1846, which excited much attention, ard was judged worthy to be compared with the county exhibitions. The association continue their organization, and from the interest manifested, they hope it will not only increase, but that its usefulness will be more widely extended. A committee consisting of the Hon. Pomeroy Jones, Salmon Case, Hon. Timothy Jenkins, and Fitch Howes, made an interesting report, extracts from which the secretary was directed to insert in the Transactions. The following resolution was adopted:

Resolved, That we deem the establishment of agricultural town associations of much importance to the advancement of the agricultural interests of the state, and that from them the farmers and others may derive much valuable and practical information, and that we believe they are well adapted to infuse a new spirit among our farmers, and will, when properly conducted and suitably sustained, prove valuable auxiliaries to the county and state organizations.

B. P. JOHNSON, Sec'y.

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VERMONT.

We have received the Prize List of the *Washington Co.* Ag. Society for this year, amounting to $500. The Fair is to be held at Montpelier, on the first of October next.

Officers of the Society for 1847.—Daniel Baldwin, Montpelier, *Pres't*; Orson Skinner, and Jacob Scott, *V. Pres'ts*; J. W. Howes, Montpelier, *Secretary*; E. P. Walton, *Treas.*

NEW-YORK COUNTY SOCIETIES.

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CAYUGA.—The annual meeting of the Ag. Society for this County, was held at Auburn, on the 13th Feb., when Chester Gridley, of Sennett, was chosen *President*; B. F. Hall, *Rec.*, and J. B. Dill, *Cor. Sec'y*; J. C. Derby, *Treas.* A Vice-President and a member of the Executive Committee, were also appointed for each town in the county. The Treasurer reported a balance of $167.87 in his hands.

CLINTON.—At the annual meeting of the Ag. Society for this county, the following officers were elected for this year: Thomas Crook, Plattsburgh, *President*; Wm. Hedding, of Chazy, S. H. Knappen, of Beekmantown, Wm. Keese, Ausable, and N. Moore, of Champlain, *V. Presidents*; Edwin Benedict, Willets Keese, G. V. Edwards, R. O. Barber, and C. L. Hager, *Ex. Com.*; Jona. Battey, Ausable, *Cor.* and J. W. Bailey, Plattsburgh, *Rec. Sec'y*; Peter Keese, Peru, *Treas.* Premiums were awarded on Field Crops as follows:

Indian Corn.—1. To John Keese, 104 bu. per acre—2. S. H. Knappen, 83 bu. 14 qts.—3. Z. C. Platt, 41 bu. corn, and 18½ bu. beans.

Winter Wheat.—1 To John Keese, 30 bu. per acre—2. S. H. Knappen, 24 bu—3. C. L. Hager, 21 bu.

Peas.—1. To C. L. Hager, 43¾ bu. per acre—2. S. H. Knappen, 24 bu.

Beans.—To S. H. Knappen, 30½ bu. per acre.

Potatoes.—1. To Wm. Keese, 220 bu. per acre.

Premiums were awarded to J. W. Bailey, 239 1-4 bu. *carrots* on one-fourth of an acre, and 569 bu. *Beets* on half an acre. A premium was also awarded to Mr. Bailey, for the best Essay on the Culture of Fruit, which is published in the Society's Transactions.

ONTARIO.—At the winter meeting of the Executive Committee of this Society, the following premiums were awarded:

To Daniel Short, of Richmond, for the best acre of *Winter Wheat*, $10; he having raised 59 86-100 bushels per acre, on 3 1-60 acres; in the whole 180 bushels.

To Whiting D. Stanley, of Canandaigua, for the best acre of *Indian Corn*, $7.00; he having raised 89 62-75 bushels to the acre, (75 lbs. of *ears* of corn allowed as the weight of a bushel.)

To Calvin Pomeroy, of East Bloomfield, for the best acre of *Barley*, $5.00; he having raised 57 bushels to the acre, on 2 58-100 acres.

To Thomas H. Kellogg, of East Bloomfield, for the 2d best acre of *Barley*, $3; he having raised 55 1-10 bushels to the acre, on 2 acres, 11-160 rods.

Stephen B. Dudley, of East Bloomfield, for the best 3 acres of *Barley*, the premium of a Vol of Trans. of the State Society; he having raised 54½ bush. to the acre.

To William R. Pettit, of Gorham, for the best ¼ acre of *White Beans*, $3; he having raised on 134 rods of land, 34 bu. and 11 quarts.

Geo. W. Bemis. was appointed Treasurer of Society, to fill the vacancy occasioned by the removal of Nicholas G. Cheesbro from the state.

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BROOK AND OHIO CO. (VA.) AGRICULTURAL SOCIETY.—We have received a number of the *Wheeling Times*, containing an account of the exhibition of this society, which was held at West Liberty, on the 8th of October last. There appears to have been a fine show of animals of various kinds, particularly of fine-wooled sheep. The principal successful competitors in this department, were Dr. Chaplin, Jesse Edgington, John Atkinson, Z. S. Mitchell, Basil Bell. Talbot Hammond, of Brooke County, received the premium for the best cultivated farm; and Wm. Boggs for the best orchard.

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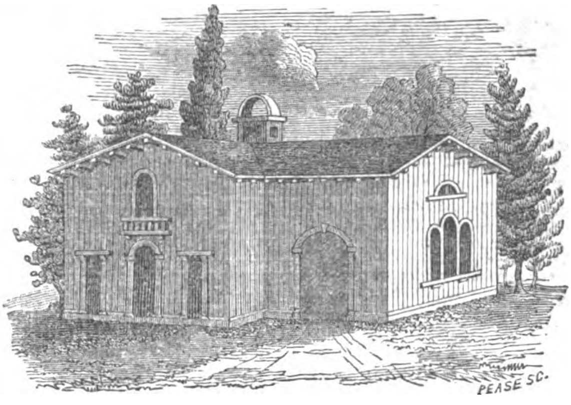
The Middlesex Co. (*Mass.*) Cattle Show and Plowing Match, for this year, will be held at Concord, on the 6th Oct. The Prize List, amounts to about $800, the greater part of which, we are pleased to see, is for details of experiments in practical husbandry, the results of which can hardly fail to be of great value to every reading and reflecting farmer.

Draining.—H. Colman, speaking of the evils of *stagnant* water in the soil beneath the surface. says: "plants produced on a very wet soil, are unpalatable. innutitrious, and insubstantial. Animals fed upon them always lose condition, and the manure of animals so fed is almost worthless. I saw this strikingly illustrated in the magnificent pork of the Duke of Bedford, at Woburn Abbey. Here there were many spots where the grass was luxuriant and abundant, on account of their excessive dampness, and which were entirely neglected both by the sheep and the deer; but wherever these places, once wet, had been thoroughly drained, they became the favorite resorts of these animals, and were fed as closely as possible."

Raising Nuts.—It is said that grafting the shagbark hickory renders it a better and more uniform bearer. English walnuts are very productive in some parts of the country—near New York is a tree which is said to have produced in one year a crop selling for $200.



ORNAMENTAL CARRIAGE HOUSE AND HORSE BARN.

We often notice, in works on Landscape Gardening, directions for concealing from view by trees, the barns and other out-buildings of the farm, with the evident understanding that they are and must be unsightly objects. We believe these directions to be founded in error, because among the most important comforts and conveniences of a country establishment, are good and commodious out-buildings. Indeed, they may in some degree be regarded as forming a union between the dwelling and the farm, in a manner somewhat similar to that by which a union between the house and ornamental grounds is maintained by means of architectural embellishments. At all events, a total absence of farm buildings would not be a pleasing sight on a fine and well cultivated farm, which should be conspicuous for all the comforts of home. Hence the true course, is obviously to improve those buildings, so that, at least partly visible through trees, they may add to, instead of defacing the scenery.

With the object of calling attention to the architecture of barns, we give a plan and view of a carriage house and horse barn, about to be erected by a gentleman in the western part of the state. It is to be built in the Italian style, and will need only a small expenditure for the completion of all its parts, above what is usually needed for buildings of this kind. In the plan it will be seen, that one part is for carriages, and the other a stable for horses, with several closets for oats, harness, saddles, whips, curry-combs, carriage grease, &c. A part of these may be omitted, and more room left for carriages.

The perspective view will be understood without much explanation. The part exibited is to face the dwelling, or the more frequented part; the back is mostly hid by trees. There are two false doors on the stable part, to add to the appearance, the actual entrance being near the corner. The chimney ventilator is an essential part. It should be remarked, that the brackets, door frames, projecting eaves, &c., should all be made substantially, of two or three inch plank.

In the plan, *A* is the room for carriages, *B* for horses, there being four stalls, the mangers *C C* containing two upright semi-circular racks for hay. The passage *D*, for feeding horses, is three feet wide, and *E*, three and a half. *F* is the entrance door to the stable, and *G* the manure door. The carriage-house doors *H, H*, are each 8 feet wide, consisting each of two four feet wide doors. The height, 15 feet, leaves a spacious chamber for hay, the larger entrance to which is nearly over the manure door, *G*, and not shown in the view.

The cost will vary with the mode of finish, and the price of materials in different localities. Such a building may be cheaply constructed of rough plank, (previously sawed of a uniform width,) placed perpendicularly, and battened on the joints, and colored by a wash of lime applied with a brush. This wash should be of a grey, or fawn color, or a medium between the two, made by adding portions of yellow ochre, Venetian red, and lamp-black, to common lime whitewash, and also dissolving in it a small quantity of salt and alum, to promote more perfect adhesion. A new coat should be given every year or two. The window and door frames should be planed and painted. A better finish would be rough inch and a quarter or inch and a half plank, matched at the edges, and battened as before on the joints, and protected from the weather by oil paint, colored as just described, and applied to the rough surface. Such a surface, though needing considerable paint at first, will retain it remarkably, and need less afterwards. A still higher finish, requiring more costly stuff for siding, and increasing the carpenter's bill, is to plane the whole surface, and cover it with three coats of oil paint. T.

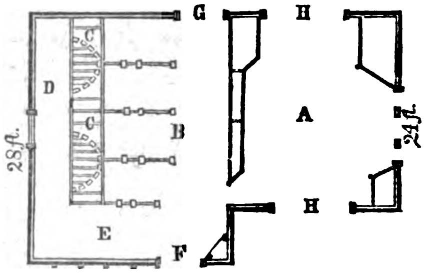
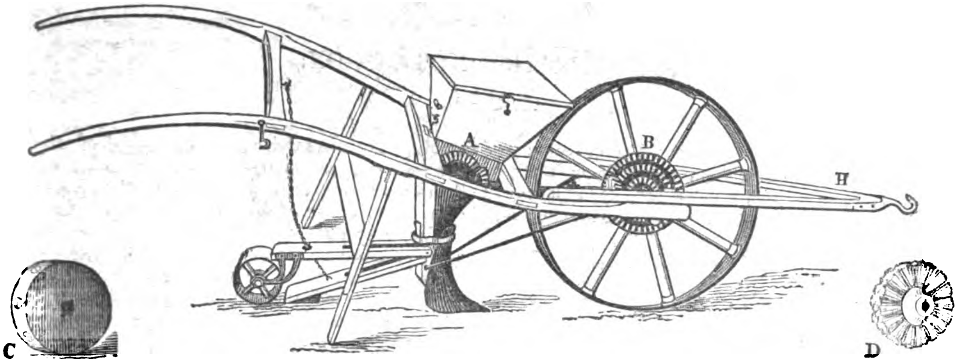


Fig. 16.

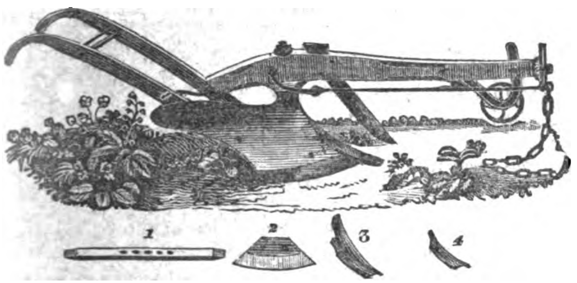
The Paulownia.—This new tree, it is well known, grows with extraordinary rapidity when young. A writer in the London Gardeners' Chronicle, says, that in England, the young shoots which from their rapid and spongy growth, do not harden well, are killed at the extremities. He adds, "the original tree at Paris, which first flowered there, is thirty feet high, the branches about twenty feet in diameter, with a clean stem three feet in circumference, (one foot in diameter.) The leaves now, upon this tree, are about the size of those of the Catalpa, and the shoots scarcely exceeding a foot in length, which of course ripen perfectly."



ALBANY SEED DRILL AND CORN PLANTER.

THE above cut represents the latest improved Drill Barrow, with attachment H, for a horse, for planting corn, beans, &c., &c. This is, in its general features, similar to the well known English Drill or Brush Barrow. It is light, strong, and durable; can be used by one man, as its whole weight will not exceed fifty pounds, or can be drawn by a horse, when a large amount of work is to be done. It is also quite simple; the small seeds, as onions, carrots, parsneps, turneps, &c., are sown by a revolving brush, D, inside the hopper, and which forces the seeds through a hole in a tin slide or plate, at the bottom of the hopper,—the holes in the slides, varying in size according to the size and quantity of seed to be sown. For corn, beans, peas, &c., the brush and tin slide, or plate, are removed, and a wood cylinder, C, substituted, with eight cavities in the same, equal distances apart, and in each cavity is a screw with a large head, which can be turned out or in to receive the requisite number of grains of seed to be sown in each hill. One or all these cavities may be used at the same time, according to the distance between the hills. The brush and cylinder both receive their rotary motion from the large or forward wheel, B, by means of small gear wheels, one of which, at B, is movable on the connecting rod from A to B, and can be confined so as to operate in any of the different rows or series of cogs in the face of the large wheel, and thereby receive a greater or less number of revolutions to the ground over which it moves, consequently varying the distance of the hills with the cylinder, from 3 to 6, 9, 12, 24, 36, 48, or 96 inches asunder. The plow can be placed up or down, to any required depth, or to suit tall or short persons holding the same; the scraper and roller follow and cover the seed, and compress the earth at one operation. Price complete, $12, and warranted; manufactured by H. L. Emery, and for sale at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-street.

EAGLE SELF-SHARPENING PLOW.



THE general form and construction of this plow is similar to that of the celebrated Eagle plow, manufactured by the same company, Messrs. RUGGLES, NOURSE & MASON, Worcester, Massachusetts. There are five sizes of this plow, the smallest of which is adapted to one horse, and the largest to the plowing of greensward.

The point, as shown at fig. 1, in the above cut, is simply a bar of wrought iron, *steeled* at each end, about twenty inches long, and passes upward into the body of the plow, where it is confined by a bolt. As it becomes shorter, and worn on the under side, it is readily moved forward and turned the other side up, thus always presenting a sharp point of full length and proper shape. When one end is worn off five inches, the other end is placed forward and performs a like service. The wing or share, as shown detached, at fig. 2, is made of either wrought iron with steel edge, or of cast iron, and is also reversable, being used either end forward, or either side up. Both point and share are so simply constructed that any blacksmith can replace them at trifling expense, or continue the use of the original by new-laying with steel, as they become worn. There is a coulter of cast-iron a little back and above the point, shown detached at fig. 3, forming part of a cap, shown detached at fig. 4, which cap protects the shin or forward part of the mould board; it is confined in its place by the same bolt that confines the point, and is cheaply replaced when worn. This is much less expensive, and in many kinds of soil is quite as serviceable as a wrought iron coulter or cutter. The plows are sold with a cutter in addition to the cap, or without the cutter, as is desired.

This plow is particularly recommended for southern plantations, where the blacksmiths on the estates can easily repair them. We think it a plow well deserving the attention of farmers.

THE FARMER'S NOTE BOOK.

Time Necessary for Maturing Field Crops.—The annexed table, compiled from my "Farm Book," you are at liberty to publish if you should deem it worthy. E. V. W. Dox. *Lafayette, Onondaga Co., N. Y., Jan.* 18, 1847.

Time when sown.	Grain.	When Harvested.	Time required to mature.	
			Months.	Days.
1838, May 1	Barley,............	Aug. 8	3	7
" 2	Spring Wheat,......	" 13	3	11
" 14	Peas,............	Sept. 7	3	23
" 19	Oats,............	Aug. 31	3	12
" "	Corn,............	Sept. 20	4	1
" 22	Potatoes,....	" "	3	28
Sept. 10	Winter Wheat,.....	Aug. 6	10	26
1839, Apl. 16	Oats,............	" 19	4	3
" 20	Peas,............	" 30	4	10
" 22	Spring Wheat,.....	" 20	3	28
May 18	Corn,............	Sept. 28	4	10
" 20	Potatoes,..........	Oct. 2	4	12
June 13	Oats,............	Sept. 19	3	6
April 16	Barley,............	Aug. 17	4	1
Sept. 14	Winter Wheat,....	" 7	10	21
1840, May 13	Peas,............	Sept. 5	3	22
" "	Barley,............	Aug. 8	2	25
" 16	Oats,............	" 20	3	7
" 27	Potatoes,..........	Sept. 24	3	27
Sept. 8	Winter Wheat,.....	Aug. 5	10	27
1841, May 8	Barley,............	" 14	3	6
" "	Peas,............	" 25	3	17
" 15	Oats,............	" 20	3	5
" 31	Corn,............	Sept. 23	3	23
" "	Potatoes,..........	" "	"	"
Sept. 15	Winter Wheat,.....	Aug. 8	10	23
1842, Apl. 23	Barley,............	" 13	3	20
" "	Peas,............	" 29	4	6
May 11	Corn,............	Sept. 24	4	13
" 13	Potatoes,..........	" 29	4	16
Sept. 27	Winter Wheat,.....	Aug. 7	10	10
1843, May 5	Barley,............	" 11	3	6
" 10	Peas,............	Sept. 1	3	21
" 18	Potatoes,..........	Oct. 17	4	59
Aug. 31	Winter Wheat,.....	July 15	10	14
1844, Apl. 16	Peas,............	Aug. 19	4	3
" "	Spring Wheat,......	" 8	3	22
May 3	Potatoes,..........	Sept. 18	4	15
" 13	Corn,............	" 26	4	13
Sept. 4	Winter Wheat,.....	July 31	10	27
1845, Apl. 30	Peas,............	Aug. 20	3	20
May 1	Potatoes,..........	Sept. 30	4	29
Apl. 30	Oats............	Aug. 20	3	20
May 9	Corn,............	Sept. 22	4	13
Sept. 10	Winter Wheat,.....	Aug. 4	10	24
1846, Apl. 27	Peas,............	" 22	3	25
May 7	Potatoes,..........	Sept. 3	3	26
" 22	Corn,............	" 22	4	0
" 30	Oats,............	Aug. 31	3	1

Training Domestic Animals.—"Train up a child in the way he should go,"—"just as the twig is bent, the tree is inclined," are remarks no more applicable to their different subjects, than they are essential to the management of the brute creation. The earlier proper training is given the child, the less difficulty will be found in leading him the right way; the sooner the twig receives the desirable inclination, the more natural and thrifty will be its growth in the wished for direction; so too, the earlier we commence training the animals of the farm for the purposes to which we design to appropriate them, the *more willingly* and *naturally* they will fulfil those purposes.

Hence we may suppose, that the sooner young stock are made *gentle*, by being accustomed to the stable, where every process of kindness is calculated to subdue the turbulence of their natures, the more affable will be their disposition, and the better they will be calculated fully to subserve our purpose. We have seen calves which were habitually tied in the stall through the winter, which ever after exhibited the gentleness of oxen. They soon learned their places, and would go to them as regularly as a company of disciplined men would go to their service, at their required time. We have seen such calves submitted to the yoke, and taught all the rudiments of ox education, such as drawing light loads, backing, &c., &c., &c. And when these calves have attained the estate of oxen, we have seen them highly commended for their power of strength and amiableness of disposition. We have sometimes, it is true, heard it remarked, that this process of early breaking and gentling steers was foolish and injurious—calculated to retard their growth and make them feeble—that they should not be broke until two or three years old, when their strength and size were more fully developed. We would not put them to hard labor to tax them to the extent of their strength until that period, nor then either. But we feel a full assurance that the earlier they are put to a moderate trial of their powers, the firmer will be the strength of bone, and the better they will be calculated to endure hardship in mature years, than though they had not submitted to training in early life. With the process of breaking, to being tied in the stable, and manoeuvred in the yoke, should be added that of leading. This, however, should not be confined to steers, but the whole stock should submit to it. It is a gentling process, valuable in its effects and lasting in its consequences. It teaches the animal in the morning of its existence, ere yet its strength leads to obstinacy, that man is its superior, and that its movements must be directed by his will,—a lesson once learned, never to be forgotten. The *convenience* of having cattle thus broke to lead, must be obvious to every farmer. How often it becomes necessary in the course of the season, to take a single creature from the herd, and remove them some distance? Every farmer must know the general tendency of cattle at such times, if they are turned loose. They will run, if a gap or gate is open they are sure to enter and take a hasty survey of the premises, or if a corner where the road branches off is to be passed, they are almost as certain to take the wrong one. Then, the boy must run, clamber over fences or stumble across stone walls, until as much time and strength are consumed as would have been necessary to break the animal to lead, at the proper age. But this is not all; the boy becomes vexed in spirit, perhaps in his anger uses harsh words, and it may be, adopts harsh means to punish the recreant, that did not know but one road would do as well as the other. Maiming or injuring may be the result, which must diminish the value of the beast. At any rate the poor animal gets no less than a fright, which leads her to look upon all such drivers with abhorrence; all which might have been remedied by a little time spent in learning the animal when a calf, to lead, and by inculcating a few lessons of *kindness*, when its susceptibilities to education were first awakening.

But there is an additional benefit in gentling and educating animals when young, which is of untold importance to them and their owner. When disease or accident befal them, at any age, and it becomes necessary for the merciful man to show extended care to his beast, its gentleness and familiarity with his kind usage are realized in a noble extent. We once saw a noble steer that had been subject to many a petting playspell, so severely choked, that the prospect for his relief seemed faint indeed, and had he been a wild, obstinate animal, he would probably have been lost. But under the influence of kind treatment to which he had been subject, he was "quiet as a lamb," while the dangerous operation was performed, that removed the obstacle, and when relief was fairly given and danger past, and he was let loose, he looked around upon his benefactors with an expression of gratitude that would have denoted nobility of soul in the most exalted of our own species. W. BACON. *Richmond, Mass.*, 1847.

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M. GUENON'S TREATISE ON MILCH COWS—AYRSHIRE & DEVON COWS.—I have read Guenon's Treatise upon milch cows, and have been a pretty close observer of the marks which he considers indicative of their value for milk. I do not believe the criterion given by him to be infallible. I have known some excellent cows for milk, where there was no development of what he calls the "escutcheon." In the region of their milk vessels, there were none of those marks and lines which are formed by the different and opposite directions in which the hair runs. One of the best Ayrshire cows imported by the Massachusetts Society for Promoting Agriculture, one that yields a great quantity of very rich milk, and if allowed, would give milk to the time of her calving, does not exhibit the slightest trace of the "escutcheon." The hair about the milk vessel all running in the same direction, no marks or lines are formed to constitute the escutcheon. The same appearance I have noticed in some other cows of unquestionably good milking properties. If, then, there are some cows which yield large quantities of milk, and which exhibit none of those marks in the region of the milk vessels, M. Guenon's rule of judging of the value of a cow, cannot be of universal application.

But I must allow that when these marks are developed, the form and size of the escutcheon, formed by them, is a pretty sure indication of the quantity and durable yield of the cow's milk. I can understand why a well formed udder, a large milk vein, and a capacious abdomen, accompanied by a soft and yellow skin, should be considered as indications of valuable properties in a milch cow; but why these marks which are formed, as above stated, by the hair running in different and opposite directions about the milk vessel, should be a sure indication of the quantity of milk the cow will yield, any more than the marks and lines which are produced by the same cause in other parts of the body, I cannot explain nor understand. I am willing, however, to confess, that when these marks do exist, they furnish a very sure guide in judging of the value of cows, and though I would not consign a calf to the butcher merely because it did not exhibit these marks, when I knew that the stock from which it descended was good, yet without the knowledge of this fact, I am willing to say that I should from these marks derive much aid, and be greatly influenced in my selection of young heifers that it would be desirable to rear. In this consists the chief value of M. Guenon's theory. Most people can judge of the milking properties of a cow that has arrived at maturity, by other and *more decisive* marks than those pointed out by him; but as these marks are as fully developed in the calf of ten days old, as in the cow of maturer years, the farmer may, by observing them, decide with more certainty of success, as to which of his calves will be most likely to contribute to the value of his dairy stock.

Upon the whole, then, I would say, that as far as my observation has extended, there are very good cows which exhibit none of the marks and lines which M. Guenon calls the escutcheon, the hair of these cows about the milk vessel all running in the same direction; but where these marks and lines are plainly seen, his theory as to the size and form of the "escutcheon" is correct, and furnishes a pretty sure indication as to the value of the cow.

You ask my opinion as to the stock imported by the Massachusetts Society. I had long known the character of the Ayrshire stock for dairy purposes, having for some years kept some of this stock owned by the Society. The Scotch farmers in and about Ayrshire, have been striving for more than half a century to produce a stock in which regard was had almost solely to their value for the dairy; and there is not perhaps in Europe, nor in the world, a race of cows that will secrete more and better milk from a given quantity of food, that are so hardy, so easily kept, that will fatten so kindly when off their milk, as the Ayrshire. The specimen of this stock, four cows and a bull, imported in October, 1845, were selected by an agent sent out for the purpose, who had lived in Ayrshire, and was familiar with all the best herds of cows in that country. As milkers they have fully sustained the high character which was entertained of that stock. The North Devon cows were selected from the celebrated stock of the Earl of Leicester, and the bull was purchased of Mr. Bloomfield, and are all fine specimens of that beautiful breed of cattle. They are not so deep milkers as the Ayrshire, but for all the purposes of the New-England farmer, are perhaps quite as valuable. We have now ten calves from the last importation of cows, eight of which are bull calves. The North Devon bull "Bloomfield," is very much in the same condition as when you saw him. He was attacked some months since with bronchitis, under which he still labors, and from which he will probably not recover. This is the more to be regretted as the specimens of his stock which we how have are very fine, and one whose pedigree is so good, could hardly be obtained in England. E. PHINNEY. *Lexington, Mass.*, 1847.

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ADVANTAGE OF ECONOMY IN VARIOUS MATTERS.—I have thought it might not be amiss to say something in reference to the great waste of coarse fodder in the grain-growing districts of our country; together with some other matters of smaller moment, relating to the economy of time and labor. I suppose farmers that most need hints on such subjects, do not generally read the Cultivator, or any other paper devoted to agriculture; yet by refreshing the memories of those that do, good may be done, and the light of well established facts, not only revived, but disseminated.

Corn fodder, by long exposure in the field, loses one-half of its nutritive qualities, and by housing or stacking in a damp state, and feeding in an improvident way, the one-half of what remains is also lost. Corn should be cut up by the ground, as far as practicable, before we have severe frosts; and it will pay tenfold for extra care and labor, in securely housing in a dry state. A light feed of cut corn fodder, well cured, night and morning, in a clean, warm stable, with straw fed in boxes, through the day, will keep cattle through the winter in as good condition as they are in at the commencement.

Buckwheat straw, when well cured and housed, is but little inferior to hay; and the chaff is eaten by cattle or sheep with little less eagerness than oats; the chaff of fifty bushels of oats, is worth one feed of hay for four hundred sheep; and corn cobs ground with a small portion of hard grain makes good feed for cattle or sheep.

Much is lost by uncomfortable exposure of stock to cold and storms. By carefully saving and economically feeding all coarse fodder, I have no doubt one-fourth more stock may be well wintered, in any of the grain-growing districts of this state, than is at present poorly wintered, in the usual wasteful way of saving and feeding.

There is a great want of economy in *door fastenings* for out-buildings, mostly in the time it takes to open and shut them. I find none so convenient and durable as good wooden ones, the catch so constructed as to let the latch slide easily over it, ,and the latch heavy enough to fall easily into the catch.

There is also great waste of time in *branding or marking sheep*, to say nothing of the trouble it gives the manufacturer to clip the tar off from one or more large letters. The proper place to brand is on the top of the rump; that the mark may be seen from any position the sheep may chance to be in, and that it may not be obliterated by their crowding together. The size of the letter need not exceed two inches in length, and should be put on without handling the sheep at all. The tar should be in a shallow vessel with a handle; the sheep should be in a close pen, (easily made with feeding boxes,) when they may be branded and counted in a very short time, without laying hands on them.

In cutting fodder, I have used for several years an additional hopper to my cutting box, one end narrow enough to rest on the bottom board of the machine box, the other to be from two to three feet wide, according to the length, which may vary to accommodate location. The broad end to rest on a saw horse with legs of sufficient length to elevate it some six or eight inches higher than the machine box; but latterly as I have no occasion for moving my machine, I have built a platform to come on the back side as far forward as the knives, extending back about six feet, and about four feet wide, with the back end elevated so as to allow whatever we are cutting to slide towards the knives. With such a fixture, you may place a large quantity within your reach, and one man can cut about as fast as two men can with nothing but the hopper attached to the machine. DANIEL S. CURTIS. *Canaan Centre, Jan. 4th*, 1847.

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INDIAN CORN AT THE NORTH.—As I uniformly obtain from 65 to 80 bushels of corn per acre, without having it "cost as much as it comes to," permit me to offer a few hints on its cultivation.

Whoever would be highly successful in growing Indian corn in a climate like that of New-York or New-England, must give it such soil, situation, and treatment, as will induce a vigorous, and rapid growth from the time of planting until the grain is perfected.

Young plants, like young animals, in order to grow rapidly, should not only have an abundant supply of food, but food suited to their age; hence the practice of applying a portion of well rotted manure or compost directly to the hill at the time of planting, having previously plowed under a quantity of long or unfermented manure spread broadcast. The amount of manure needed for an acre depends in a great measure upon the state of the soil, but it is always desirable to have the land in such a state as not to require more than 25 oxcart loads to the acre, exclusive of that applied to the hill. The quantity of fine manure or compost applied to the hill, should vary according to the materials used and wants of the soil, from half a shovel full to a single handful.

As among the best materials known for this purpose, may be named well rotted manure from the barn-yard or hog-pen, together with night-soil, domestic guano, ashes, and plaster; the proportion of each will depend in a great measure upon the nature of the soil cultivated; it is impossible to give any arbitrary rule that will suit every location, but it may be observed however, that the more powerful and highly concentrated the mixture, the more care necessary in applying it, and a less quantity should be used.

Much judgment is requisite in preparing the land for planting. Some of the poorest as well as some of the best crops that have ever been raised, have been grown on green sward plowed but once. While one farmer selects a brittle, friable sod, which he turns in angular furrows, not too deep, at the same time using a subsoil plow if necessary, and has a first rate crop, another (who, by the way, does not read the Cultivator,) selects a damp, tenacious soil, and although he applies a liberal quantity of manure, buries it 7 or 8 inches deep under a flat dead furrow, and the result proves him to be about as successful as was the crow in the fable, which attempted to imitate the eagle by carrying off a lamb. The cornderives little or no benefit from the manure under such circumstances.

The kind of corn I cultivate, is a yellow, eight-rowed variety, of medium size, with small stalks, and although such a variety would no doubt produce more by being planted in drills, yet it is found best, on the whole, to plant in hills, not to exceed two feet apart; making rows only one way; the rows three feet apart; and at this distance and with this variety, three stalks may be allowed to remain in each hill.

The seed is prepared for planting by being soaked about twelve hours, and then rolled in plaster. The steep for soaking the corn is made wholly with reference to forwarding its growth, and *not* for keeping off crows; the boys are allowed the pleasure of doing that. The rolling the seed in tar, and the like substances, often proves an injury to it, and although the crows may not eat the corn thus treated, they frequently pull it up and leave it on the surface which is quite provoking.

As soon as the corn is up so that the rows may be plainly discerned; let a well constructed harrow, with fine sharp teeth, be passed through, taking care to rectify any hills that may be disturbed; after this use such implements as the nature of the soil may seem to demand, the object being to keep the earth loose and free from weeds. It may also be necessary to give the hills a *slight* earthing with the hand-hoe, twice during the season.

The next thing claiming attention, is the selecting of seed for the following year, which should be done by an experienced hand, as soon as the earliest ears have ripened; and as like produces like, select such ears as you would wish the whole crop to resemble, and in a few years it will in a great measure do so.

By pursuing this course, (if you have a variety suited to the location,) there will be no danger of its "*running out*" or "degenerating;" and I am warranted in saying this, from the fact, that the same corn has been continued on the farm I cultivate for forty-five years. LITTLE FARMER. *Otsego Co., N. Y.*, 1847.

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GREEN WOOD VS. DRY.—MR. THOMAS. in his contributions to the editorial department of your January number, has made some calculations designed to show the comparative value of green and dry wood for fuel. His calculations are based on the supposition that *every cord of green wood contains "more than six barrels of water;"* and that the heat necessary to boil and evaporate these six barrels of water, or more, which, he says, might be made "available," by burning dry wood, is lost, wasted, and made *unavailable*, when green wood is burned; and hence arrives at the conclusion that the farmer who burns twenty cords of green wood in a winter, as, he says, many do, "also performs the *needless task* of evaporating sixty barrels* of water, which," he calculates, "is equal to heating to the boiling point no less than six hundred barrels," &c. If there is "any mistake or error in these calculations," he requests they may be pointed out. This is the object of the present communication.

That there is a difference in favor of dry wood on the score of comfort and convenience, no one who has experienced the comforts and convenience of a wood-house. well stored with dry wood, will be disposed to deny. But it will be hard to convince a great many *farmers* that the difference in point of economy is any where near so great as the calculations of this writer would represent; especially where it is used in an open fire-place.

He says "In the consumption of *every cord of green wood*, six barrels of water are made to boil, the heat of the wood passing into the water, instead of being *liberated*, and becoming *available*, as would be the case if the wood was dry, and no water to heat."

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* This mistake may have been in the manuscript, or have originated with the printer—it should be one hundred and twenty barrels. T.

In the first place, the assumption that "*every cord of green wood*" contains "*six barrels* of water," borders a little too close on the marvelous to be readily comprehended and swallowed by some of our old fashioned farmers, who have more common sense than arithmetic. But admitting the assumption to be correct, it is by no means a necessary consequence "that the other calculations follow as a matter of course." For if, as he says, six barrels of water are to be heated, and evaporated, while burning one cord of green wood, the heat necessary to boil and evaporate this quantity of water, is just as "available" in heating a room, as the same quantity of heat would be emanating from dry wood, or any other combustible substance. The same fire that heats and evaporates the water, heats the air also; and it is an error to suppose that any part of this heat is wasted and lost, any more than heat would be in the same situation, caused by the combustion of dry wood, or any other kind of fuel. And the green wood certainly has the advantage of being more permanent and lasting. It is not necessary, nor does it follow as a "matter of course," that *all* the water and moisture contained in wood, should be expelled to make it fit for the fire, and the most valuable for fuel. Under most circumstances, wood that is suddenly about half seasoned, is worth the most for fuel. Take, for example, a stick of green wood and put it into a heated oven, or expose it to the blaze of a hot fire, till it is a little scorched, or to the heat of the mid-summer sun; let it remain in either of those positions until one-half of the moisture is expelled, and it will be better and worth more for fuel than either green or thoroughly seasoned dry wood. If it could be done, it would be far better that wood should be seasoned in *two hours* than in *two years*, as this writer recommends; because the quicker the expulsion of the sap and moisture is effected, the harder and more compact will be the wood; and fire is a good agent to effect it. Acting from this principle, the back-woodsman heats his maul in hot embers, or in the blaze of a hot fire, to expel the moisture, and make it hard and durable. And on this principle the heat that drives the water from the wood, at the same time hardens it, and from this cause it is longer in being consumed, even after the water is thus expelled, than would be the same quantity, after having been subjected to the slow process of a two years' seasoning.

I think that Mr. Thomas, in making the above calculations, multiplied the consideration of comfort by too large a factor, thus making it overbalance that of dollars and cents;—an error he was more careful to avoid in his subsequent calculations. J. TOWNSEND. *Zanesville, O., Feb.* 5th, 1847.

REMARKS.—On reading the preceding communication, from our esteemed correspondent carefully over, there does not appear to be anything in it that invalidates the correctness of the calculations referred to.

The calculations were not based on the "supposition" merely, but on the undoubted *fact*, that every cord of green wood contains six barrels of water, the experiments to prove which were carefully tried by accurate weighing, by the writer of these remarks; hence, he spoke from actual knowledge, and not from "supposition." Other experiments may vary slightly, but not materially, the given result. In opposition to these actual experiments, it will be observed that our correspondent brings only the mere assertion, that it "borders a little too close on the marvelous, to be readily comprehended or swallowed," &c. Why could he not have tried the experiment himself, by drying the wood in a warm room, instead of opposing the mere prejudice or opinion of "old fashioned farmers," to actual fact and correct calculation? Why does he not *show* the error of this calculation, instead of merely condemning it in so summary a manner? Why does he adduce the fact that many farmers are "hard to convince," as a proof that such farmers are necessarily correct?

He brings his mere isolated assertion to controvert the fact, that the heat which passes into water and becomes latent, and ascends in this latent state up the stove-pipe or chimney, also at the same time cannot pass into the room and heat it. Can it be possible that he holds the opinion that any given quantity of heat may be in two places at once? That is, that it may, at one and the same time, be passing into the water of the green wood to heat and evaporate it, and into the air of the room to heat that also? When the heat of a fire is thus divided, a part at least must be lost; and that loss must be greater as the water in the wood is greater. It is indeed true, that the same *fire* or blazing mass of fuel, which heats the room, also heats the water which passes up the chimney; but the same *portion* of heat from that fire, does not go both ways at once.

He brings his mere assertions, unconnected with any substantial reason or argument, to prove that half seasoned wood is better than wholly seasoned. For the reasons given in the "calculations," referred to, and from repeated direct experiments with stoves and hot-air furnaces, the writer of these remarks thinks far otherwise. It is indeed true that with an open fire-place, no advantage may result from the use of well seasoned wood, from the rapidity with which the increased heat is swept up the chimney; but our correspondent will observe that one object of those calculations was to show the inutility of fire-places. And it is also true that wood left to season in shady woods, or in wet places, may be half decayed and half spoiled, before it is dry; but this does not prove that wood thoroughly seasoned under shelter while perfectly sound, is not better than green.

It may be that the calculations were deficient in clearness, and thus led to misapprehension; the writer therefore hopes he may be excused for thus more fully explaining himself. ...... T.

EXPERIMENT WITH INDIAN CORN.—Enclosed I send you a statement of the result of an experiment made to satisfy myself as to the injury the corn crop would sustain from the practice of pulling off the blades at the usual time of "fodder gathering." I regret much that I did not take the tops from one set of rows; but I have but little doubt that it is a more injurious practice than either of the others. I felt anxious to know if the practice of cutting up the corn at the roots, which does not prevail in our section of country, would not injure the crop; and although from my experiment there was no material loss sustained, yet the experiment did not satisfy me, as from indisposition of myself at the time at which the corn arrived at the state that it is usually recommended to be cut, it was neglected, and consequently not cut till the blades were nearly all dry, and the corn fully matured. The extract annexed was taken from a letter written to my nephew at Marion, Alabama:

You desire to know the result of an experiment made on the corn, from a part of which you assisted me in taking the fodder, in order to ascertain what loss it would sustain from being deprived of its blades at the usual time of "fodder pulling." You will recollect we laid off 12 short rows, as near equal in quality as were to be found in the field,—that on rows Nos. 1, 4, 7, and 10, the fodder was left; as it was also on Nos. 2, 5, 8, and 11; that from Nos. 3, 6, 9, and 12, the blades were taken to the top. Nos. 1, &c., were left with blades on till gathered. Nos. 2, &c., stood till the blades were all dry to the ear, and some to the top, then cut off at the root and shocked up as tops are usually put up to cure when cut. Nos. 3, &c., remained on the ground, as did No. 1, &c., till gathered. And now for the result.

No. 1 shelled, measured 1 bushel 1 gallon 2 qts. and 1½ pts., and weighed 71½ pounds.

No. 2—1 bush. 1 gal. 2 qts. and 1 pt., and weighed 70½ pounds.

No. 3—1 bush. and half pint—weighed 55 lbs.

The fodder from No. 3, &c., was carefully cured without being wet, and kept to itself, and when the corn was measured and weighed, it was also weighed. Its weight was 18 lbs., which, added to the weight of the corn from which it was taken, made 73 lbs. But 2½ lbs. more than the corn of No. 1, and 3½ more than that of No. 2. No. 1 and 2 were thought not to be quite as dry on shelling, as No. 3; they were consequently well sunned before the above measures and weights were taken; No. 3 was not sunned. Upon the whole, the experiment proves conclusively to my mind, what I before believed, that in pulling the fodder, we deprive our corn of the weight, or very nearly so, of the fodder taken. GEO. SEABORN. *Pendleton, S. C., Feb.* 21, 1847.

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POUDRETTE.—In the February number of the Cultivator, I notice a communication signed "Pennepack," referring to an experiment I made with poudrette on corn, the result being very different from what he expected. I can say I was disappointed in the result. I mentioned in that statement, that the poudrette I received was very different from what was shown in the office. Which was the best I could not say. That poudrette is a very good manure I have no doubt, but from some cause, that did not prove very profitable to me. I could perceive some difference in the fore part of the season, in the color of that on which the poudrette was used; it was of a darker green, but the size was very little if any larger. J. SHERMAN. *Milton, Feb.* 2, 1847.

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"THAT WHICH YE SOW SHALL YE ALSO REAP."—I have been a reader of the Cultivator for years, and have been pleased with the discussion on the subject of wheat turning to chess. I sowed a piece of new land to winter wheat, a few years ago. I purchased some clean seed wheat, but could not find enough that was clean, and was told that it would make no difference, for wheat would turn to chess if winter-killed. Necessity obliged me to try the experiment. I bought two bushels of wheat with some chess in it, and one bushel with twice as much as there was in the two bushels. I sowed the clean wheat on one side of the piece; next I sowed the two bushels, and next to that I sowed the one bushel. Land all the same quality except a few low places running crosswise of the field. The wheat was sowed lengthwise. It winter-killed in the low places. There was not one chess head to be found where the clean wheat was sown; but where the two bushels were sown, there was twice as much chess as I expected, and where the last bushel was sown, I believe it was one-eighth chess. There was ten times as much chess in the low places as anywhere else. I have never sown any chess since; neither have I raised any. I have heard some men say that they have known barley turn to oats, by being eat off by cattle when it was heading out. I think the last as true as the first. N. ROBINSON, Jr. *Stow, Vt., March* 1, 1847.

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CORN FODDER.—Last year I gave you a short account of my sowed corn crop. In the winters of 45, '6, it was my principal dependance for fodder. On the produce of two acres, I saved a horse, a yoke of oxen, three cows, and three young cattle, which else would have been nearly sacrificed, as were my neighbors' cattle. The drouth had so cut off the hay, that people offered one-half their stock to get the other half wintered, and no one would take them at that.

I was so well pleased with my experiment, that I determined to "try again." So this year I sowed the same amount of land again, at the rate of two and a half bushels of seed to the acre, broadcast. I had a fair yield, and the fodder proves equally as good as last year; and though I do not need it as last year, yet it is preferred by all my cattle to the best of hay. They will leave hay untouched when the corn fodder is before them, quite as much as they will leave straw when that and hay are both offered them at a time. They will eat up all the fodder clean, seeming to prefer the stalks (which are full of saccharine matter,) to the leaves. And when I feed with corn fodder, I use no grain, which I am obliged to do when I feed hay. On this account this food is admirable for calves, and young cattle. I am keeping some calves on this alone, without a particle of grain, and they are in fine order. Horses do not like it as well as hay. Cattle and sheep do much better.

On the ground of economy, it is altogether better than any other feed I have tried. It requires very little labor, except the harvesting, (which is a heavy job,) and the yield per acre, has been at least seven tons of cured fodder. It is called good grass that yields a ton and a half to the acre, and much does less. The only trouble about the corn fodder is, that it needs a great deal of curing. It is so green it will heat and spoil unless it is thoroughly dried. After trying several ways, I now bind it in small bundles as soon as cut—shock it right on the ground, and let the shocks stand six or eight weeks in this way, when it is so dry that it may be packed in a mow, and except the outside, is perfectly bright and free from must. The outside is blackened a little, but none of it is wasted. H. *Ohio, Dec.*, 1846.

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VIRGINIA SHEEP PASTURES.—In the year 1845. I stated in the Cultivator, that the mountains of Amherst must be equal to any portion of the earth for grazing sheep; and yet, the more I see and reflect, the more I insist on it. In the month of November last, I had two gentlemen to visit me from Washington Co., Penn., both of whom own large flocks of fine sheep, and on examination, they declared that the Cold Mountain is at least equal to any grazing lands they ever saw. One of those gentlemen, with two others, has now returned to Amherst, in search of lands, and say if they can purchase farming lands in the county, then they will buy the mountains for grazing.

Since the above mentioned publication in the Cultivator, I have received sundry letters of inquiry as to those lands, and now make a general answer.

A considerable portion of those lands cannot well be richer; and when cleared, a luxuriant growth of greensward and white clover takes full possession, and furnishes pasturage from March till January. I say this grass takes full possession, because nothing of the brier, shrub, or thistle kind, or any other pess, is found on those mountains where they are grazed. Indeed, in many places, acres of greensward are seen where fires have killed the trees and bushes, and where, perhaps, they will never grow again. The tops of those mountains are certainly best for sheep, and here nor near their summits, neither Indian corn, tobacco, nor wheat, can be grown. Of course, I here speak of our highest mountains, for we have hills and mountains of every grade usual in Virginia. Rich and handsome mountain land can be bought for $1 the acre—rich and rough, at about 50 cents—poor, from 10 to 50 cents per acre.

It is useless to answer about roads and schools, further than the remark, that we are an enlightened people. Come and see.

Lands lying well in the heart of the country, and improved, can be purchased for from two to eight dollars, and these adapted to all the valuable products of the country.

The mountains are well adapted to the growth of rye, oats, buckwheat, hemp, flax, potatoes, turneps, beets, apples, orchard grass, timothy, greensward, and white clover; and the valleys between the mountains produce yellow corn and tobacco tolerably well. Za. Drummond. *Amherst, Va.*, 1847.

One of the gentlemen from Pennsylvania, is well known at Lowell, his wool selling there for the highest price. His name is Patterson. Mr. P.'s associate is now with me, and says they have determined after full *search*, to graze about 900 fine sheep on the highest mountain in Amherst. Z. D.

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Fixing Ammonia.—It is said that plaster of Paris (gypsum, or sulphate of lime,) fixes the *ammonia* of rain water by forming with it a *sulphate of ammonia*, which is a fixed salt. This I do not understand; my tables of affinity stand thus, with respect to the degree of affinity which certain bodies have for *sulphuric acid*. For example—

Sulphuric acid.—1. Baryta; 2. Strontia; 3. Potassa; 4. Soda; 5. Lime; 6. Ammonia, &c.

Now by this, it is evident to me that if carbonate of lime and sulphate of ammonia are mixed together, the result would be sulphate of lime and carbonate of ammonia, a *very* volatile salt, whereas no salt of ammonia could decompose the sulphate of lime, lime having a stronger affinity for sulphuric acid than ammonia. I could understand the theory well if ammonia stood in the place of soda. Perhaps some of your chemical correspondents would explain this discrepancy, or apparent discrepancy. Probably the plaster of Paris is a *super-sulphate* of lime, in which case I can imagine the ammonia combining with the excess of sulphuric acid. T. H. *Colchester, Canada West.*

[We apprehend there may be a difference of opinion in regard to the above table of affinities. We should like to hear the remarks of any of our chemical friends in regard to it.—Eds.]

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Agricultural Capabilities of North Carolina.—The agricultural capabilities of this part of North Carolina, are by no means great or extensive; other avocations absorb the attention of the mass of our population. Our lands consist principally of extensive forests of pine barrens. Turpentine, lumber, and tar, the produce of those forests, afford means of subsistence to the majority of our people. There are some good lands on our rivers, and a strip on our sea coast, beginning 10 miles from Wilmington and extending northwardly about 50 miles, with a breadth of from one to two miles. The public road, which passes close to this region, presents the most uninviting aspect in the universe—the deserts of Africa not more so—and a traveler would little suspect that he was in the neighborhood of extensive and not unfertile plantations. Of this region, being my locality, I shall more particularly speak.

The growth of timber in its primitive state, was oak, hickory, and walnut; the soil a dark sandy loam, producing fair crops of everything but wheat. The timber is nearly all cut down, or rather destroyed; for, pertinaciously treading in the steps of our forefathers, we are in the habit of clearing land, "killing" it by injudicious cultivation—clearing more, and "killing," until all is cleared and exhausted; and then we have nothing to do but clear ourselves. Log-rolling succeeds log-rolling, and heaps of beautiful timber are annually devoted to the flames, until in a few years there will be nothing to feed flame in kitchen or parlor.

The farmers of late years have turned their attention to the culture of pea-nuts. This crop resembles, in its more luxuriant state, a field of red clover. It is a most destructive crop to land. The usual ordeal is to plant after all the vegetable matter has been cleared from the land. When harvested, it is entirely removed from the soil, leaving no vestige of vegetation; the high winds in winter and spring, take off the loose and exposed soil, and although we are sensible of the homicide, or rather *land slaughter* we are committing, cupidity is so excited by the tempting prices the article bears in market, that neither Moses nor the Prophets, nor one risen from the dead, would deter us from pursuing the injurious course. Yet we are an industrious people; but the system of farming needs a radical change, and I think it can be effected only by taking and reading useful publications, like yours. I take my full share of the rebuke with my neighbors, and perhaps am more to blame than they, for sinning against light and knowledge.

Between the main land and the sea shore, is a marsh apparently of alluvial soil, about 1½ miles wide, intersected with innumerable creeks of salt water, presenting to the eye one of the most delightful meadows in nature. It sustains a coarse grass, from two to three feet high, which horses and cattle will eat, and many of these animals are reared entirely upon it, the grass being perennial. Whence the alluvial deposit proceeds I know not, as there are no large rivers making into the marsh; the country back for 100 miles being sand, and almost a dead level. It is filled with beds of oysters, and on the margin of high land, by the continual attrition of the tides, those shells become pulverized, being no bad substitute for marl. A friend of mine, a respectable scientific farmer in the interior of the state, has taught me to make an excellent manure from the mud, grass, and shells. The process is as follows:—Make a bed of marsh mud, say thirty feet long by 8 feet wide, and one foot deep. On this put the pulverized shells two or three inches deep; place on them 8 or 10 inches of the coarse grass,—then a coat of mud, and proceed as in the first course, alternating the materials until your heap is about four or five feet high. Then cover the whole with a thick layer either of mud or of common soil. This should be done while the grass is green. Let it stand until winter sets in; then cut it down with spades, turn it over, and apply it to the soil, after the first plowing.

By this process, the acidity in the grass will in a great measure be destroyed; yet the compost will carry enough of the grass and lime into the soil to give it a healthy action. Let the beds be formed on the soil to be cultivated.

This process may meet the eye of some farmer similarly situated with myself, on our extensive seacoast, and if he derives any benefit from it, I shall be amply compensated for my trouble in making it known. J. D. Jones. *Topsail, New Hanover Co., N. C., Feb.*, 1847.

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Breeding Sheep.—Whatever may be the diversity of opinion in regard to in-and-in breeding, to a limited extent, there is no doubt of its injurious tendency when carried to any considerable length; and it is a matter of some moment to be able to discover, by visible signs, those animals whose constitutions have been thus injured. In swine, it is a commonly received opinion, that a hollow back of the shoulders, is a pretty sure indication of this course of breeding.

My principal object in this article, is to start the inquiry, what is the index of in-and-in breeding among sheep? It is an opinion of those who speak with the voice of oracles, that the falling of the wool upon the shoulders,—a lifeless appearance of the wool in that part of the fleece, is the unerring evidence of it. Is this true? It is doubtless true that this trait is found in many flocks where this pernicious system has been practised. If there was originally any of this bareness upon the shoulders, in-and-in breeding would doubtless perpetuate, perhaps increase it, unless an effort was directed to breed it out. Upon what evidence is this opinion based? If the theory is established, unquestionably many facts may be adduced, seeming to corroborate it; but the question is, upon what facts is it established?

Now I have the experience of the best shepherd of my acquaintance, and who has no superior in Ohio, upon this subject. He does not deny that this may be the true sign and result of breeding in-and-in, but says he has no sufficient evidence; on the contrary, his own observation contradicts it. His flock is one of the oldest in the state. About fifteen years ago, this peculiarity prevailed to a considerable extent in his flock; there had never been any in-and-in breeding whatever; but now he attempted to breed it out, and used for this purpose rams from his own ewes, but of foreign rams. In a few years this fault disappeared, in consequence of his breeding in reference to it.

It is an opinion that breeding in, has a tendency to render the wool harsh. This is believed by many excellent shepherds. Now, is it not true that to a great extent, animals are in the care of the breeder as clay in the hands of the potter? You may breed horns on your flock, or breed them off—woolly legs or bare legs—long wool or short—close or open. May not this peculiarity of the shoulders be a similar trait, which may be bred in or out at pleasure? And is not the above instance a pretty clear evidence that this *result* of interbreeding may be obliterated by the very course which is said to produce it?

In agriculture, emphatically, experience should be the lamp to direct our path, and it is facts we want. Just now the growing of fine wool is engrossing the attention of the people of eastern and northern Ohio, and whatever relates to the subject is of vital importance.

Our hill land in the county of Washington, yields excellent pasture for sheep, and upon the bottom lands we suffer the grass to grow upon the meadows without pasturing until winter, as this aftermath affords the best winter feed in our mild climate. Sheep are very healthy here, and this winter, thus far, have done well. DARWIN E. GARDNER. *Marietta, Ohio, Feb.* 1, 1847.

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MOUNT AIRY AGRICULTURAL COLLEGE.—We have received from JAMES GOWEN, Esq., a copy of a prospectus for the establishment of an Agriculturul College, to be located on his estate called Mount Airy, near Philadelphia. Mr. G. is a gentleman possessed of abundant means for carrying on such an institution, and he has for a long time taken a deep interest in rural affairs, and zealously devoted himself to the advancement of agriculture and horticulture. In this laudable undertaking, we are confident he has been influenced by no motive of speculation or pecuniary gain. Want of space prevents our giving the prospectus entire, though the principal outlines of the plan are shown in the following:—EDS.

To educate youth in the leading branches of popular learning as taught in our Colleges, with the addition of practical and theoretical Agriculture and Horticulture, with their attendant sciences, the undersigned contemplates founding an Agricultural College at Mount Airy, his residence, eight miles from the city of Philadelphia, a site favorably known for its healthiness and beauty, and as having until recently been, for many years, a seat of learning, and now in gardens, grounds and buildings, admirably suited for the purpose.

Students will be admitted at ten years old and upwards. The young pupils in the elementary branches of the scholastic department will receive special and particular attention. The more advanced in years and learning, on entering, will be classed according to their qualifications, and all will be carried forward as rapidly and understandingly as practicable, to a perfect and thorough completion. In the Agricultural department a similar classification will be made in view of the age and capacity of the students, and their exercises proportioned accordingly. The exercise or labor of all however, will amount to no more than will be deemed necessary for healthful recreation and change, to diversify and lighten the monotonous and depressing drudgery of the mere student. In this way, by a varied course of study, rural exercise, and popular lectures, it is intended to accomplish the important work, and to give to Agriculture an impulse that cannot fail to raise it to the rank it should assume, and ought to hold throughout the land.

These views are respectfully submitted by way of prospectus, affording a glance at the aims and merits of the contemplated Institution, and for the purpose of eliciting such share of patronage as will encourage the undersigned to carry out his long cherished design. If therefore eighty students shall offer, on or before the first day of July next, he will open the college on the first day of September following, with a faculty combining the best talent, both in literature and rural economy.

The terms will be *two hundred dollars* per annum for board and tuition, payable half-yearly in advance—no extras, except for modern languages, for which it may be necessary to make some additional charge, all of which, when properly matured, will be stated in a special prospectus, when the requisite number of students shall appear to be forthcoming.

Parents wishing to avail themselves of this plan of educating their sons, will please address JAMES GOWEN, Mount Airy, Philadelphia, stating age and acquirements in learning. It is requested that early application be made, as the opening of the college is contingent upon the number of students offering, and as much of the *materiel* necessary to its perfect organization must be withheld until it is ascertained that sufficient patronage will be accorded.

A word as to the undersigned himself.—To those who know him 'tis needless to say, that this great undertaking is prompted by no interested motive whatever; for all the capital to be employed, and all the trouble and anxiety incurred, he expects not a dollar by way of profit or remuneration for his services. He therefore wishes to stand in the proper attitude before all, and leave to all the means of making a fair estimate, and coming to a proper determination so far as they may feel interested. JAMES GOWEN. *Feb.* 22, 1847.

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STEAMING APPARATUS.—I want to erect a steaming apparatus, to steam at least 100 bushels of chaff, or cut straw, together with such other feed as I want to mix up, say the whole not less than 100 bushels, at one steaming. Now, if any of your numerous subscribers have such an one, I should be obliged by their giving a full description of the same through the Cultivator, with the cost exclusive of the building, and if at not too great a distance, I would go and see it. I know that straw or chaff scalded is much better feed than dry, but this is too much work where there is a large stock, and I think steaming would be much more economical. By giving this in your April Cultivator, you will much oblige A SUBSCRIBER.

[We are unable to say where such an apparatus as is above inquired for can be found, but insert the communication in the hope that it may be the means of bringing out the desired information, as well as the opinions of our readers in regard to the profit of steam-food for stock.—EDS.]

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A ROARING FOUNTAIN.—The highest fountain in the world, is on the grounds of the Duke of Devonshire, in England, where a single jet is thrown up to a height of 267 feet—more than 100 feet higher than Niagara Falls. The eight acre reservoir which supplies it, is 389 feet above.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from J. V. D. Jones, Caius, Prof. J. P. Norton, B. C. Van Vleit, J. Bolding, A Subscriber, D. T. Brown, Elisha Hammond, W. J. Bingham, N. Robinson, Jr., Geo. Seaborn, N. H. Waterbury, Dutchess Ag. Institute, A. W. St. John, P., Ruralist, A Subscriber, Wm. Bacon, R. L. Pell, Prof. Lardner Vanuxem, A Constant Subscriber, A. P. P., Son of a Subscriber, Wm. Canfield, Henry Brewer, Thomas Close, Wm. R. Prince.

Books, Pamphlets, &c., have been received as follows:—Proceedings of Clinton Co. Ag. Society for 1846, from W. Keese, and others.——The Chemical Principles of the Rotation of Crops, by D. P. Gardner, M. D., from the Author.——Agricultural Reports made to the Standing Committee of the Rhode-Island Society for the Encouragement of Domestic Industry, from J. G. Clarke, Jr.——Catalogue of Fruit and Ornamental Trees, cultivated at the Syracuse Nursery, by Thorp & Smith——Catalogue of Green House Plants, Shrubs, Roses, Herbaceous Plants, &c., cultivated by L. Menand, on the Troy Road, near Albany.——Forty-first Report of the Trustees of the Public School Society of New-York.——Report on the Trees and Shrubs growing naturally in the Forests of Massachusetts, by Geo. B. Emerson, a beautiful octavo vol. of 550 pages, from Joseph Breck, Esq.

C. B. Redford, Mich.—We shall be glad to receive the communication you propose to write.

New-York State Agricultural Society.—We publish in this number, the Premium List of the New-York State Agricultural Society, to which we invite attention. It will be seen that the amount of money offered is much greater than in any former year, being upwards of three thousand dollars. Nearly all the premiums are increased in amount, and many important ones added. In the departments of Fruits and Experiments particularly, very important extensions have been made, which can hardly fail to attract notice and insure a rich exhibition, as well as to bring out much valuable information. The Fair, it will be seen, is to be held at Saratoga Springs, and we believe that the people of that place and vicinity are determined to do all in their power to render it in every respect what it should be. The keepers of hotels and boarding-houses have issued a circular by which it is shown that they will board and lodge guests at the time of the Fair at the ordinary rates of charge—the prices averaging from one to two dollars a day—the latter being only charged at the first-class hotels—the "United States," "Union Hall," "Congress Hall," &c.

☞The Louisiana State Agricultural Society, at a meeting recently held at Baton Rouge, unanimously elected the Hon. **Zadock Pratt**, the enlightened and patriotic President of the Greene Co., (N. Y.) Ag. Society, an honorary member of that association. Mr. Pratt has done, and is doing, much to advance the intellectual interests of our country, and the compliment thus paid him was richly deserved.

Rhode-Island Society for the encouragement of Domestic Industry.—We have received from J. G. Clarke, Jr., Esq.. a copy of the Reports made to the standing committee of this Society for 1846. On looking over the pamphlet we find various interesting matters, and shall in due time appropriate some of them to our use. This Society has been the instrument of great good to the state of Rhode-Island. We would acknowledge our obligation to the officers for the subscription of 175 copies of the Cultivator.

Drilling Rock.—We have lately examined a machine for drilling rock, called "Scovill's Patent hand and horse-power drill," which appears to be a very valuable invention. Worked by one horse, this machine has been proved to do the work of twenty-five men, by the ordinary mode of drilling. It has been used in several situations, and is much approved by all who are acquainted with it. The engineers on the Illinois and Michigan canal, where the machine has been extensively used, certify that a well constructed drill. worked by two horses, will drill in a solid rock a hole five inches in diameter, forty feet in a day. Dr. R. Dibble, Rochester, is agent for this State and Pennsylvania.

Specimen's of Apples.—We are indebted to Nathan Howard, Esq., of Stephentown, for samples of several kinds of apples, among which are the Newtown pippin, Monstrous pippin or Gloria mundi, Scarlet nonpareil, King apple, (perhaps the *Newark King*,) and the "Prentice russet," (perhaps the *English russet*.) All the specimens, with the exception of the Newtown pippin and the russet, were too over-ripe to show their true flavor. The russet is a beautiful apple and of very rich sprightly flavor.

Morgan Horses.—We invite attention to Mr. Wier's advertisement in this number, of the horse called "Gifford Morgan." This is the horse, it will be remembered, which, together with the "General Gifford," attracted so much attention at the State Show at Auburn. Mr. W. informs us that he has sold to E. Marks, Esq., of Syracuse, a Morgan mare and her colt, (a superior animal,) by the Gifford Morgan, and he also states that Mr. M. purchased at the same time another mare and filly by the same horse. These, with the "General Gifford," and the Morgan stock mentioned in our February number as having been purchased by Gen. Burroughs, will give the people of central and western New-York an opportunity of seeing what the real Morgan horses are.

Large Fleece.—"A Cayuga Wool Grower" sends us a statement in reference to the fleece of a Merino ram, called *Columbus*, belonging to Erastus Robinson, of Shoreham, Vermont, which received the first premium at the show at Middlebury last fall. It is said—"Columbus is three years old last spring, was sheared six days after being well washed; his fleece, which lacked twenty days of one years' growth, weighed thirteen pounds and two ounces." The same writer states that Mr. R. has a good flock of Merino sheep.

Large Calf.—Mr. J. M. Cleaveland, of Adams, Jefferson county, N. Y., gives us an account of the weight of a Durham bull calf. At nine months and fourteen days old, it is stated that he weighed "910 pounds, in the presence of a crowd of witnesses."

Bee-Hive—We have received a communication from B. C. Van Vliet, of Poughkeepsie, in regard to Mulholland & Crane's bee-hive, a cut and advertisement of which was given in our July number for 1845. This hive is on the subtended principle: that is, it consists of sections or boxes placed vertically over each other, and as the bees fill them empty ones are placed at the bottom. It is a very good mode of managing bees, but is not new, having been in use for more than sixty years. In regard to the *color* of bee-hives, Mr. Van Vliet recommends that they should not be white; because, as he thinks, "anything white attracts the miller as they fly at night. Set a pan of milk," he says, "near a bee-house, and in the morning the surface will be covered with dead millers."

Samples of Wool.—We have received several samples of Merino wool from **John W. Paddock**, Esq., of Wyoming, N. Y. Some of them are very handsome. He states that his flock, consisting of upwards of 200, will average four pounds of "clean" wool per head, and that his "stock buck" sheared last year eight pounds of "washed" wool.

Manufacture of Flour.—Mr. **John Boldin**, of Philadelphia, wishes for "extensive information about the system of flour-making in Rochester." We would suggest that he address some of the manufacturers in that city, stating the particular kind of information wanted.

Disease of the button-wood tree.—S. **Ruckman**, Esq., of Bath county, Va., informs us that the button-wood or sycamore is affected by some malady or insect which causes its decay. He is inclined to think it is a "small bug," many of which he says he has seen on one small limb. Our readers will recollect that mention has frequently been made in our columns of the disease of this tree, and we believe it has been before suggested that it was caused by an insect. We should be glad to know, however, whether any one is able to describe the insect which is supposed to be the cause of the trouble.

Difference in the quality of milk.—Farmers in general are not aware of the great difference there is in the richness of milk. In butter dairies, especially, this is a point which deserves attention. The mere fact that a cow gives a large quantity of milk is scarcely any evidence of her value for the production of butter. It is but a short time since we heard a farmer state that he had a cow which would give from 20 to 22 quarts of milk per day, and he had till last season always considered her a first-rate cow; but it then happened that her milk was set separately for butter, when it was proved that only about four ounces per day could be obtained. This may be called an extreme case; but let the milk of various cows be fairly tried, and a surprising difference will often be seen. Mr. **Newell**, in his address before the Essex County (Mass.) Ag. Society, observes that according to his observation, there is much less uniformity in the milk of what we call "native" cows, than in that of the Ayrshires and Alderneys. He says—"A few years ago I made a little experiment to test the quality of the milk of sixteen cows.—A gallon of each cow's milk was set by itself, and after standing twenty-four hours, the cream from each was churned by itself, and the quantity of butter ranged from three to eight ounces." Thus is it seen that while the milk of some cows afforded a pound of butter to every eight quarts, it required more than twenty-one quarts of the milk of some others to make that quantity. Will not this fact be remembered?

Chiccory.—This plant was formerly cultivated chiefly for its value as food for cattle and sheep—the leaves being cut for this purpose several times a year. It is now much cultivated in England for the purpose of mixing the dried roots with coffee. Mr. **Colman**, speaking of its cultivation for this purpose, says—"Chiccory is to be sown in April, like carrots in drills, kept clear of weeds, and the plants thinned out to the distance of six inches in the rows. In September the leaves are taken off and the plants dug with a fork; they are then washed and split by hand, and kiln-dried, and sold to other factors, who cause them to be burnt and ground like coffee, which, in that case, they entirely resemble. They greatly deepen the color of the liquid when prepared as coffee; and when mixed in the proportion of a fifth, they communicate no unpleasant taste."

ANSWERS TO INQUIRIES.

Connecticut Tobacco.—W. C. N., (Maysville, Ky.) For the mode of cultivating tobacco in Connecticut we refer you to an article in vol. 1, new series of the Cultivator, page 87. We should like to have some one explain the difference between the Kentucky and Connecticut tobacco—showing the reason why the latter should be worth, (as it generally is in New York,) more than double the price of the former.

Subsoil Plows—J. W. L., (Monroe, Pa.) The prices of subsoil plows are as follows: For the size suited to one horse, $5; for two horses, $7; for six oxen, $12. A charge of $1.50 more is made for the addition of a wheel and draft-rod.

Worn-out lands in Maryland.—W. T., (Frederick county, Md.) We should think one of the best modes of improving the worn-out soils of your region, would be that practiced by **George Patterson**, Esq., described in vol. 2, new series of the Cultivator, pages 204, 205.

Alpacas—Cotswold Sheep, &c.—A. C. R., (Kirtland, O.) There have been no alpacas imported into the country, or not more than one or two, which have been kept in menageries. It is not probable that they would cross with the Merino, or any other of our domestic breeds of sheep, as they belong to a different genus—being more nearly allied to the camel than the sheep. If, by chance, a hybrid should be produced between the alpaca and common sheep, it is probable it would be barren. Cotswold (or improved Cotswold) sheep differ from Leicesters in being somewhat stouter framed, having generally rather hardier constitutions, and producing heavier fleeces. Their wool is from seven to ten inches in length, and fleeces average from six to eight pounds—*clean* wool. When fatted they weigh from 25 to 35 pounds per quarter. Their value here is from ten to twenty dollars per head.

Buckthorn Hedge.—"A Subscriber," (Hanover, N. H.) Mr. **Downing**, in an excellent article on the cultivation of hedges in the February number of the Horticulturist, advises that the plants should be cut down to within six inches of the ground; that the following spring they be cut so as to leave one foot of the "current season's growth;" that they be "shortened back" the third year so as to leave one foot of the year's growth; and he adds—"this course must be pursued every spring till the hedge is of the desired height and form, which will take place in five or six years."

Tiles for Draining.—J. W. P., (Wyoming, N. Y.) Tile which are properly made, will no doubt answer the purpose of draining well, and we presume would not "dissolve." They have been used extensively in England and Scotland for a long time.

Sheep Husbandry.—J. F. J., (Park Hill, Va.) The number of sheep which can be pastured on an acre, depends, of course, on the quality of the soil and the favorableness of the season We have known seven kept on one acre for several months, but the best of grass land is required for this, if the sheep are expected to thrive—in some instances the same extent of land would not support three. One hundred Merino sheep are as many as are usually kept together in winter; but more may be kept in a flock in summer, only giving range and food in proportion to numbers. It is preferred (for large flocks) to have lambs dropped at the time when the grass has started so as to afford the ewes a "bite." The period of gestation with this animal is five months, so that it is easy to see when the ram should be put with the ewes, to have the lambs come at the season when the grass may be expected to be at the right stage. The average weight of common Merino fleeces, washed in the ordinary way, is three pounds, and the wool is worth now about thirty to thirty-five cents per pound.

We do not know what is "customary," in regard to a division of profits, where one person furnishes land and another sheep. As a work comprising much information on sheep, we recommend **Morrell's** "*American Shepherd*," which is for sale at most bookstores in the eastern cities.

Seed of the Buckthorn.—W. J. B., (Hillsboro', N. C.) The seed of the Buckthorn can be obtained at the Albany Ag. Warehouse and Seed Store, and we presume, at the seed stores in the principal cities. The sets can probably be obtained of most of our nurserymen.

Osage Orange.—The article on this subject in our Dec. number, last vol., comprises about all the information we are able to furnish in regard to it.

Time for cutting timber.—The general opinion is that stumps are less likely to sprout if the growth is cut in August. In regard to the durability of the timber, we think it makes but little difference when it is cut, provided it is immediately seasoned, or thoroughly dried.

Leached Ashes.—B. M. J., (Frederick county, Md.) Leached ashes do not generally act as favorably on heavy clay soils as on those of a lighter and more sandy character. We should think, however, that from 100 to 200 bushels per acre, in connexion with a clover sod, or with a portion of the clover crop turned in, would have a highly fertilizing tendency; but we should be rather in favor of trying 100 bushels per acre before using double the quantity. The effect of ashes and other alkalies in regard to the growth of sorrel, we think has not yet been fully settled, and we cannot, therefore, say what would be the result from its use in this respect. As to the *profit* of using leached ashes "at eight cents per bushel," that can only be determined by the extra produce they enable the land to yield, and the value of that produce. As to the question whether leached ashes are "more valuable than good barn-yard manure, well rotted," it will depend on circumstances. On some soils, ashes would probably be worth more than the same quantity of manure. On the heavy soil which you describe it is doubtful whether they would be worth as much. [See Cultivator, new series, vol. 2, page 87, and vol. 3, pages 110, 173.]

Seed-corn.—A. L., (St. Josephs, Mich.) Corn which is perfectly ripe and *dry*, is not injured for seed by being exposed to any degree of cold in the crib or shock.

Charcoal as manure—Soaking seeds in Ammonia.—L. R. M., (Toronto, C. W.) We have no information in regard to charcoal as manure, except what has been heretofore published. As to soaking seeds in ammonia, the results from it have been very uncertain, and the practice is of doubtful utility.

Quantity of Carrot seed for an acre.—A Subscriber, (Simsbury, Ct.) If the seed is of good quality and well cleaned, two pounds is sufficient for an acre. The rows should be at least eighteen inches apart, if it is designed to use a horse with a harrow or cultivator, in the cultivation of the crop. Three inches space should be allowed between the plants in the row, if it is wished to obtain the greatest yield.

Food for milch cows.—B. S., (Bedford, N. H.) For winter food we prefer well-made clover hay, cut while in blossom. If something in addition is given, we should prefer two quarts of Indian corn meal with a quart of wheat bran or shorts. For roots we prefer carrots or potatoes, and would give from a peck to half a bushel per day.

A good sale for good butter.—The *Binghampton Courier* states that sixty firkins of butter from the dairy of O. C. **Crocker**, Esq., of Union, Broome county, was sold in New York in February last, for 22½ cents per pound.

NOTICES OF NEW PUBLICATIONS.

First Annual Report of the Ohio Board of Agriculture, for the year 1846, made to the Legislature, and published by their order.

The Legislature of Ohio, at its session in 1846, passed an act authorizing the organization of a "State Board of Agriculture." This body, having been duly formed, proceeded to take measures for obtaining, in accordance with the provisions of the original act, "a general view of the condition of agriculture throughout the state;" and for this purpose a circular was issued by the Board, calling for information from the different counties in relation to the character of the soil, the principal crops cultivated, the prices usually obtained for them, &c., &c. Answers to this circular, more or less full, have been received, and are published, from fifty-one counties. The information in regard to the yield of crops, is not so full as could have been desired. The estimates appear to have been made without reliable data—the persons who submitted the reports for the several counties, generally stating what the yield was thought to be. In some instances the range of the yield is shown by stating the minimum and maximum. Under these circumstances it is difficult to make out from the returns what may be called an average for the state; but in making some calculations in reference to this point, we have taken the amount given for the different counties in those cases where it is specified, and for those counties where the maximum and minimum are given, we have taken the medium; and in this way deduce the following:

In relation to Wheat, the Report gives returns from forty-four counties, showing a yield of from twelve to thirty bushels per acre—an average being about seventeen and three-fourths bushels.

In relation to Indian corn, there are returns from thirty four counties, showing an average of about forty and a quarter bushels per acre.

Twenty-three counties give returns for oats, showing that the yield of this grain ranges from twenty-three to forty-five bushels per acre, the average being about thirty-four and three-fourths bushels.

The Report, however, contains much interesting information in relation to the agricultural resources of Ohio—a state whose natural capacities are not excelled by any one in the Union; and as the government and people seem to have become convinced of the importance of encouraging and improving the art which constitutes the basis of all prosperity, we trust the efforts so well begun, will be continued; and the result, we are confident, will be highly beneficial.

Allen's Bee-Cultivator, embracing the Natural History, Physiology, and Management of the Honey Bee; by Thomas R. Allen, Syracuse.

A small pamphlet which contains some good practical observations on the management of bees.

Chemistry of the Four Seasons, Spring, Summer, Autumn, and Winter: an Essay principally concerning Natural Phenomena, admitting of interpretation by Chemical Science, and illustrating passages of Scripture; by Thomas Griffiths, Professor of Chemistry in the Medical College of St. Bartholomew's Hospital, Author of "Recreations in Chemistry," and "Chemistry of the Four Elements." Lea & Blanchard, Philadelphia.

In the preface to this work, the author states he had had the "high and enviable honor of delivering before the queen" his essay on "The Chemistry of the Four Ancient Elements," which, having by "gracious special permission" been dedicated to Her Majesty, "had the good fortune to meet with a favorable reception from the public;" and he adds, "I am therefore induced to publish the Chemistry of the Four Seasons." It is a work which he tells us is not written for the "proficient, but for the unitiated in Chemistry." It contains some very interesting observations on natural phenomena, though we do not in all cases perceive the illustration of "passages of scripture," by reference to chemical science.

The Chemical Principles of the Rotation of Crops; pronounced before the American Agricultural Association, March 4th, 1846; by D. P. Gardner, M. D., Honorary consulting Chemist of the Association, Member of the Lyceum of Natural History, etc., formerly Prof. of Chemistry and Natural Philosophy, in Hampden Sidney College, Va.

The leading object of Dr. Gardner, in this essay, has been to explain the necessity of a rotation of crops on chemical principles, and in this we think he has perfectly succeeded. We recommend the paper to the notice of the public as containing a plain and satisfactory view of the subject to which it is devoted. The paper forms a part of the Transactions of the American Agricultural Association.

American Journal of Science and Arts: Conducted by Professors B. Silliman, and B. Silliman, Jr., and James D. Dana. New Haven—$5 a year—published every second month.

A very valuable work. Every number is filled with articles of interest to the man of science, and many of them are of such a character that they are perused with much pleasure and advantage by ordinary readers. The number for March has articles, among many others of value, on Hybridity in Animals, considered in reference to the question of the Unity of the Human Species; Observations on the Uses of the Mounds of the West, with an attempt at their classification; Geological results of the Earth's Contraction in consequence of cooling.

Address before the Farmer's Association of Lewinsville, Fairfax Co., February 2, 1847, by Samuel S. Randall. Published in pursuance of a vote of the Association.

We have received a copy of the *Fairfax News* containing a copy of the above address. It is an interesting and valuable document, well calculated to stir up the people of Virginia to the improvement of their agriculture. It is gratifying to us that Mr. Randall is so well pleased with his new location, where we have no doubt he will render himself highly useful, by co-operating with others in inspiring a taste for rational agriculture and its kindred branches.

SOWING CLOVER SEED.

Those who have not yet sown nor procured their clover seed, should remember the result of experiments, published in the Cultivater some years ago, which proved, *that cloverseed kept over one summer, would be dear at half price*. This seed greatly deteriorates by age; hence care should be taken to have it as fresh as possible.

Experiments performed in England have shown that clover seed does best when but very slightly covered, or very near or at the surface of the earth. Thirteen compartments or beds were sown, the seed in each successive one being buried a quarter of an inch deeper than the preceding; and varying from merely sprinkling on the surface, to three inches deep. The following numbers indicate the number of plants which came up in each bed from an equal number of seed, each successive one being a quarter of an inch deeper:—17, 16, 14, 11, 11, 8, 4, 4, 0, 0, 0, 0, 0. From no depth to about one inch, the seed mostly came up; but two inches deep and deeper, none came up. Hence the impolicy of covering cloverseed with a heavy harrow; washing in by rain on fresh earth, or working in by the crumbling influence of frost, being better.

Extensive Peach Orchards.—Downing's Horticulturist states that in the county of Newcastle, Del., there are about 2,500 acres devoted to peach orchards, the annual product of which is nearly or about $200,000.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, March 19, 1847

FLOUR—Genesee, per bbl., $6.87½a$7—Ohio and Michigan, $6.87½

GRAIN—Wheat, white, per bushel, $1.60a$1 75—Rye, northern, 87½c.—Corn, Northern and Jersey, 85a95c.—Barley, 75—Oats, 43c.

BUTTER—Orange County, per lb., 20a22c.—Western dairy, 14a16c.—Ohio and Shipping, 9a10c.

CHEESE—Best shipping, per lb., 8a8½c.

BEEF—Mess, per bbl., $11a12—Prime, $8.50a$9.50.

PORK—Mess, per bbl., $14.25—Prime, $12.25

HAMS—Smoked, per lb., 9 cts.

LARD—Per lb. (new) 10c.

HEMP—Russia, clean, per ton, $210—American, dew-rotted, $120a$140—American water-rotted, $175a$225.

HOPS—Per lb., first sort, 9a11c.

TOBACCO—Connecticut, per lb., 10a11c—Kentucky, 3¾a4½c.

SEEDS—Flax, per bushel, $1.64a$1.30—Clover, per lb., 7¼a8¼c.—Timothy, (herds-grass,) per bu., $3.

COTTON—New Orleans and Alabama per lb., 10a13¼c.—Florida, 13¼c.—Upland, 9¾a12¼c.

WOOL—(Boston prices.) March 19:

Prime or Saxon fleeces, washed per lb.	42a47	cts.
American full blood fleeces,	37a40	"
" three-fourths blood fleeces,	30a35	"
" half blood do	28a32	"
" one-fourth blood and common,	25a28	"

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Postscript.—March 22d. The steamer Hibernia arrived at Boston on Saturday afternoon, at 4 o'clock. The news from England is twenty-nine days later. The prices of Bread-stuffs are somewhat higher than at the last previous advices. The following is a comparison of the prices at the time of the sailing of the steamers of the 4th Feb. and 4th March:

	4th Feb.	4th March.
Flour,	40a41s.	39a42s.
Wheat,	11s. 3d.a11s. 9d.	11a12s.
White Corn,	68s.	69a70s.
Yellow do	70s.	72a74s.

The impression in England is, that prices will be fully sustained for some time to come.

FOR SALE.

SHORT HORN and Devon Cattle—each thorough-bred of their kind. The cattle of these stocks have been bred many years by the subscriber, and were originally selected from the best herds, and crossed with the best and latest imported blood, with a particular view to the development of their most valuable qualities.

Also, thoro'-bred Cotswold, (long-wooled,) and South Down Sheep, of the best descriptions, descended from the choicest English flocks.

They can be forwarded from here east and north, by canal and railroad, and west by steamboat, with safety and dispatch.

LEWIS F. ALLEN.

Black Rock, N. Y., April 1, 1847.—apl & j'y.

THE OLD MORGAN GIFFORD HORSE,

SO well known in Vermont and New Hampshire as the highest blooded Morgan stallion now remaining, will be found the coming season at the subscriber's stable, in Walpole, N. H.

Terms—$15, of which $5 is to be paid at the time of service, and the remaining 10 if the mare proves in foal. Pasturing will be provided for mares from a distance, and the necessary attention given them. Accidents and escapes at the risk of the owners. A cut of this horse may be seen in the Sept. No., 1846, of the Cultivator.

FREDERICK A. WIER.

Walpole, N. H., March 9, 1847.—3t.*

ALBANY SEED STORE.
FRESH GARDEN SEEDS,

THE growth of 1846. The subscriber begs to inform his friends and customers that he is now daily receiving his fresh Garden and Flower Seeds, and has now in store a general assortment, from the most reliable sources, both foreign and domestic. Among the more important, and for the first sowings in hot beds, he would name—Early York, Sugarloaf, and Battersea cabbage; Early Ox Hart, a French variety of unequalled quality, for both heading and delicacy of flavor; it comes in use immediately after the York, and is of equal delicacy; fine Early Cauliflower; Cape Broccoli; Early Prince Albert Peas: Cedo Nulli; Blue Imperial, and other renowned Garden Peas; Early Scarlet Short Top Radish; best Early Lettuces; Purple Egg Plant; Apple or Rareripe Tomato, &c.

From his long experience in the business of a Seedsman, and unequalled correspondence, both at home and abroad, he hopes to merit an increased continuance of patronage. His assortment of Field Turneps, Carrots, and beets, is not to be surpassed. And in the Flower Garden department, every variety to be found in London and Paris is regularly sent out:—the finest German Asters and and Balsams, with too numerous a list of new Annuals to put in an advertisement. Gladiolus Floribunda Roots, Tiger Flowers, Double Dahlias, and many other desirable spring bulbs. Canary birds, of the finest song. Fancy Cages in great variety; fresh Canary, and other bird seeds; Glass Fountains, &c., &c. ☞ Traders supplied.

WM. THORBURN,

April 1—2t. Corner Broadway and Maiden Lane.

☞ Also a large and fine assortment of Fruit Trees and Roses. Catalogues gratis.

ANCIENT AND REAL LINNÆAN BOTANIC GARDEN AND NURSERY,

Late of William Prince, deceased, Flushing, L. I., near New-York.

THE new proprietors of this celebrated Nursery, known as PRINCE'S, and exclusively designated by the above title for nearly fifty years, offer for sale every description, including the rarest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing and moderation in charges.

Descriptive Catalogues *gratis*, on application, *post-paid*.

WINTER & CO., Proprietors.

April 1, 1847—1t*

THE HORTICULTURIST,

AND

JOURNAL OF RURAL ART AND RURAL TASTE,

EDITED BY A. J. DOWNING, ESQ.

No. IX, FOR MARCH,
CONTAINS:

I Hints on Planting Trees in Towns and Villages—II. American Vineyards—III. Notes on Propagating Trees and Shrubs by Cuttings of the Roots—IV. The Bizarre Orange—V. Notes on the Market Gardening of New-Jersey—VI. Apples in Vermont—VII. Cultivation of Roses—VIII. On Transplanting Large Trees—IX. Quince Stocks for Pears—X. Design for a Cottage Villa—XI. The Twenty Best Pears—XII. The Heathcot Pear and Cherry Plum—XIII. Description of some new or rare Hardy Shrubs—XIV. Hints on Planting Apple Orchards—XV. Review of Colman's European Agricultural Tour—XVI. *Foreign Notices:* Smee on the Potato Plant; Winter Gardens of Berlin; Japanese Taste in Arboriculture; Gardens of Turkey; Descriptions of new Plants, &c. &c.—XVII. *Domestic Notices:* Horticultural Notes; Letter from Mr. Longworth; Superb Collection of Camellias; Treatment of Orange Trees in Pots; History of the Tyson Pear; Culture of Grapes at the South; The Locust; Culture of Oxalis Bowii; Climbing Roses; Parlor Plants in Winter; Treatment of Carnations; Retrospective Criticism; The Arbor Vitæ; Grapes in Vineries; The American Holly; Scarce Plants—XVIII. Massachusetts Horticultural Society.

ENGRAVINGS—Design for a Cottage Villa; Frontispiece—The Bizarre Orange—The Cherry Plum—The Heathcot Pear—Deutzia scabra—The Double Crimson Currant—Spiræa douglasii—The Two winged Silver Bell.

NOTICES OF THE PRESS.

The Editor of this attractive journal has earned a wide renown by his elegant and most useful works on Landscape Gardening, Cottage Architecture, and Pomology. As an original and accomplished author in these attractive and popular pursuits, he has no rival since the death of the indefatigable Loudon; and his merits have been acknowledged by marks of high consideration from some of the crowned heads of the Old World.—*Silliman's Journal.*

This magazine is printed and illustrated in beautiful style, at Albany. As to its character in other respects, it is sufficient to say that it is conducted by A. J. DOWNING, the most distinguished writer in the Union on all topics connected with horticulture.—*Cincinnati Gazette.*

We strongly recommend this excellent and useful work to all who are attached to rural pursuits, either for amusement or for profit.—*Montreal Gazette.*

Every one at all ambitious of keeping up with the improvements of the day, in gardening, should subscribe for this Journal.—*New-Orleans Com. Times.*

We have found much pleasure in assuring ourselves of just what we anticipated of the work in such hands, a *desideratum* for the advancing taste of the country in horticulture and rural architecture, to which the work is chiefly to be devoted. No person, perhaps, combines more harmoniously the scientific and the practical than the originator of this work.—*New-York Evangelist.*

The Publisher respectfully gives notice THE HORTICULTURIST, devoted to the cause of useful and elegant rural improvement, is now thoroughly established by a large circulation. The articles that have already appeared from the able pen of the Editor on fine new Fruits, Plants, and Horticulture generally, as well as on Cottage Architecture, Ornamental Gardening, etc., have given the work a very high character. The list of contributors includes the first horticulturists and practical cultivators in the country. The "Foreign Notices" present a monthly summary from all the leading gardening journals of Europe; and the numerous beautiful illustrations—designs for cottages, green-houses, etc., figures of new fruits, shrubs and plants, render this one of the cheapest and most valuable works to country gentlemen, amateurs, or practical cultivators, published on either side of the Atlantic.

Price $3 a year, in advance. The back numbers furnished to new subscribers. Letters enclosing the subscription, to be addressed to

LUTHER TUCKER,
Publisher Hort. Albany, N. Y.

PEACH AND OTHER FRUIT TREES.

50,000 PEACH TREES, of vigorous growth, 6 to 8 feet in height, comprising twenty of the best leading varieties for market, will be supplied at $10 per 100, for cash, remitted with the order. The matting, &c., will be $2 per 100.

Pear Trees, of all the leading varieties, 8 to 9 feet high, with heads, at $18 per dozen, and others, averaging 5 feet, at $50 per 100. Pears untrimmed, for Quenouilles or dwarfs, 2 years grown, $9 per dozen; and 3 years, in a bearing state, $12 per dozen; 3000 Newtown Pippin; Spitzenberg and Baldwin apples, and 10,000 of other leading varieties, 6 to 7½ feet, at $30 per 100, and others at $25 per 100. 10,000 Orange and Anger's quinces, the finest varieties known, from 3 to 5½ feet in height, at $20 to $30 per 100. A great stock of Plums, Cherries, Apricots, Nectarines, Grapes, Gooseberries, Raspberries, Currants, Strawberries, &c., at low rates, by the quantity.

30,000 Isabella, Catawba, and other American Grapes, for Vineyards and Market Fruit, and 5000 Foreign Grape Vines, for Grape Houses, &c., all at lower rates than ever before offered.

☞ The accuracy of every article is expressly guaranteed; and we refer to every distinguished amateur for the precision with which all orders are executed by us. WM. R. PRINCE & Co.

Prince's Nurseries, Flushing, April, 1847.—1t.

JOSEPH BRECK & Co.,

NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.

Nos. 51 and 52 North Market-Street, Boston.

OFFER for sale one of the most extensive collections of VEGETABLE, AGRICULTURAL, and FLOWER SEEDS, to be found in the country, comprising a large assortment that are new and rare.

Also, every description of HORTICULTURAL and AGRICULTURAL IMPLEMENTS, and TOOLS, together with a general assortment of Agricultural and Horticultural Books.

Superb varieties of FLOWER SEEDS.—We have now a full supply of fresh flower seeds from the most celebrated Florists in Europe, from our own garden in Brighton, and from other sources, of the most select varieties ever offered in this country. Special attention has been given by the subscribers in long practice, in improving the numerous varieties of hardy flowers, which have so long been the object of their cultivation, and they feel assured that the seeds saved by themselves cannot be surpassed by any other growers in the country.

GARDEN SEEDS.

Early Peas—Cedeo Nulli, Early Warwick, Early Smiths, Early Hill, Early Frame, Bishop's Dwarf, Blue Imperial, Knight's Marrow, Marrowfats, of different sorts, 25 cents per quart. Prince Albert, 37½ cents per quart; Royal Green Marrow, very superior, and Queen of the Dwarfs, a very superior Marrowfat, not exceeding 1½ foot in height, new and very excellent, each 50 cts. per qt.

Cauliflower—Large Asiatic, and other early and late varieties.

Broccoli—Chappel's Cream, New Hardy Cape, Purple Cape, Cheltenham, Brimstone, Early White, Purple &c.

Cabbages—Warner's Incomparable, (very early) Queen, do.; Wellington, Imperial, Early Hope, Early York, and other fine sorts.

Couve Tronchucea, or Portugal Cabbage—a delicate vegetable of the Cabbage family, considered by some equal to the Cauliflower; 12½ cents per package.

German Greens—A handsome growing plant, and very desirable for "greens;" 12 cts. per package; Weeden's fine Long Frame Prize, one of the longest varieties—25 cts.; White Spine, 12½ cents; Early Synotts' Early Frame, &c.

Celery.—Bailey's Red Solid, Bailey's White do.; Seymour's White Solid, and other varieties.

Egg Plant.—Purple and White.

Endive—New Transparent Yellow, 12½ cts. Tomatoes.

Thyme, Sage, Sweet Majoram.

Melons—Nettled Cantaloupe, Black Rock, Minorca, Skillman's Fine Rock, Persian, Nutmeg, Green Citron, &c.

Also every other variety of Garden Vegetable Seed.

AGRICULTURAL SEEDS.

A general assortment of Carrot, Ruta Baga, Beets, Mangel Wurtzel, Turnep, Parsnep and other seeds for the field. Also

GRASS SEEDS.

Northern and Southern Clover, White Dutch do.: Lucerne, Herds Grass, Northern and Southern Red Top; Oat Grass, Orchard Grass, Perennial Rye Grass—wholesale and retail.

Potato Seeds, at 50c cents per package—sufficient for 2000 plants.

Fruit Trees, and Ornamental Shrubs and Plants, of every description—furnished at the lowest rates, and of the choicest varieties, at short notice. April 1, 1847—1t.

THE GENUINE MORGAN HORSE GENERAL GIFFORD.

THE horse purchased by the subscribers at the late State Fair, at Auburn, where he was exhibited, together with his sire, the Gifford Morgan," and attracted universal admiration, [see report of Committee on Foreign Stock, in Cultivator, vol. 3, page 342,] will stand the ensuing season for mares, on Mondays, Tuesdays, and Wednesdays, at the stable of Geo A. Mason, two miles northeast of Jordan. Thurdays Fridays, and Saturdays, at Camillus.

TERMS—$10 the season. Insurance to be agreed upon. Pasturage for mares furnished by either of the subscribers at a reasonable price.

GEO. A. MASON,
D. A. MUNRO.

March 15, 1847—2t.

FRUIT TREES FOR SALE.

THE subscriber respectfully informs the public that he still continues the Nursery business, about one mile north of the Steamboat Landing, in the Village of Newburgh, and directly opposite (East) of the Powellton House.

All orders (post-paid) punctually attended to.

March 1—2t CHAS. DOWNING.

COMMERCIAL GARDEN AND NURSERY, OF PARSONS & Co.

Flushing, near New-York.

THE proprietors of this establishment are constantly increasing their stock, which now covers nearly seventy acres of ground, and includes every desirable variety of Fruit and Ornamental Trees, Shrubs, Roses, Vines, &c. Their possession o specimen grounds for the testing of every variety of fruit they cultivate, affords them increased facilities for the attainment of correctness. They would also call attention to their large assortment of Foreign Grapes, some seventy varieties of which they are fruiting under glass.

To venders, and those who purchase in large quantities, liberal discounts will be made. Catalogues can be obtained gratis of PARSONS & LAWRENCE, 10 Pine st.; of A. B. ALLEN, 187 Water st., New-York, or of the proprietors by mail.

March 1, 1847—2t.

CHOICE VARIETIES OF FRUIT.

BY S. MOULSON,

At the Old Rochester Nursery.

TWENTY thousand trees of the celebrated Northern Spy apple, all of which are root grafted. Those seven to eight feet high, fifty cents each; medium sizes, thirty-seven and a half cents; small ones at less. A discount will be allowed to purchasers of large quantities, for the purpose of selling again. This highly desirable and long-keeping fruit, having been introduced by this establishment at an early period. the proprietor is enabled to offer larger trees upon their own stocks than are usually found; and having been grown from scions of the original bearing trees in this vicinity, parties ordering may be sure of their genuineness.

Also, a general assortment of Apple, Pear, Quince Plum, Cherry, Peach, Apricot, Nectarine, Currant, Gooseberry, Raspberry, Strawbery, and Ornamental Trees and Shrubs, which will be properly packed, when desired, for any portion of the United States, Canada, or Europe. Catalogues gratis to post-paid applicants. Orders not accompanied with remittance, must contain reference, which may be to parties residing at Rochester, Boston, New York. or Philadelphia. Also at Montreal, Kingston, Cobourg, Toronto, or Hamilton. S. MOULSON,

March 1—2t. Office 36 Front-st., Rochester, N. Y.

SEED POTATOS FOR SALE.

A FEW hundred bushels of Hall's Early June Potatoes. This variety after a cultivation of four years, has proved, when planted early, unaffected by the potato disease. It is the best early potato raised for market, grows large, produces a fine crop, and is an excellent potato for fall and winter use. Several persons who applied last year through Comstock & Co., and were not supplied, have the preference this year by an early application. Orders may be addressed to the subscriber, or left at the Agricultural Warehouse of Luther Tucker.

March 1—2t. WILLIAM HALL.

PLOWS! PLOWS!!

THE attention of Farmers and Dealers is particularly invited to our assortment of Farming Tools—among which may be found a complete assortment of the most approved as well as common plows, including all sizes of the Center Draft, Side-Hill, Subsoil, Self-Sharpening Plows, from Messrs Prouty & Mears, of Boston. Also, the Eagle, Subsoil, Side-Hill, Self-Sharpening, and others, from Messrs. Ruggles, Nourse & Mason, of Worcester, Mass. Also, the Peekskill Plow, all sizes, from Minor & Horton, of Peekskill, N. Y., and Delano's Diamond Plow—all for sale at the manufacturers' home prices, and warranted. The adjustable Steel Point Self-Sharpening Plows, from the factory of Messrs. Ruggles, Nourse & Mason, is just received. This is a new improvement in the wearing parts of the plow, and has several advantages over the common plows in use. (See R. & N.'s advertisement.) Also on hand Cultivators, Harrows, Seed-Sowers, and Planters, Ox-Shovels or Scrapers, Field Rollers, &c., &c., &c., at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany, N. Y. L. TUCKER.

FOR SALE.

A FARM of 325 acres, in Fishkill, Dutchess Co. It is partly high limestone land, with some rich alluvial meadows along the Mattewan Creek. The buildings are new and extensive—the fences all good, and the soil in fine condition. Increased production can be obtained from inexhaustible supplies of muck and limestone on the farm. The Hudson river is six miles distant, besides which the villages, mills, and factories, near, furnish abundant market. In productiveness and position, it is one of the choice locations in the country. The beauty of this part of the country, and the variety of its scenery, make it a desirable residence. Address, post-paid, WM. VAN WYCK, Jr.,

March 1—2t.* Fishkill, Dutchess Co N. Y.

BOX FOR EDGINGS.

ONE Thousand yards Box Edgings, for sale at a low rate. Apply at the Agricultural Warehouse, No 10 Green-st., Albany.

March 1—2t. LUTHER TUCKER.

ATLANTIC GARDEN AND NURSERY,

Smithtown, Long Island, near New-York.

THE subscribers offer for sale at very low prices, a large assortment of Fruit trees, including Apples, Pears, Peaches, Cherry, Quince, Nectarine, Plum, Apricot, &c., of the most approved sorts. Also, the choicest kinds of Gooseberries, Raspberries, Currants. Strawberries, &c., &c.

The assortment of Ornamental Trees, Shrubs, and Herbaceous Plants is now very extensive, including over 10,000 Evergreen Trees, and Shrubs.

The stock of Apples and Pears, containing over 35,000 trees, includes the finest sorts in cultivation.

Orders by mail, or otherwise, will recieve prompt attention. and trees will be packed in the the best manner, and forwarded to any part of the country agreeable to order.

Catalogues sent to every post-paid applicant.

Feb. 1—3t. P. DOANE & SON.

SENECA LAKE.

A BEAUTIFUL FARM for sale, lying on the east side of the Seneca Lake, Seneca Co., N. Y., about 7 miles south of Geneva, containing about 159 acres of the best quality of land There is about 50 acres of excellent wood and timber land, and the arable and meadow land is of the best quality and in good condition. Lowest price $50 per acre. The one-half of the purchase money may remain on bond and mortgage for many years. Title good. The farm may be viewed at any time. Apply to RICHARD DEY, on the premises, or to JAMES R. DEY, No. 51 Liberty-st., New-York, or to JACOB C. DEY, Fulton-st., Brooklyn.

Fayette, March 1, 1847—3t.

FINE PURE BRED SHEEP FOR SALE.

THE subscriber being about to give up the farming business, offers for sale his stock of Merino Sheep, consisting of 54 pure bred Merino ewes—all with lamb by the celebrated Rambouillet Buck "Grandee," owned by Rev. L. G. Bingham, of Williston, Vt. Also 50 lambs from the above-mentioned ewes, got by the Rambouillet buck "Chancellor," and the Paular "Mt. Defiance," now owned by Merrill Bingham, Esq., of Cornwall, Vt. It is believed by their owner that they are fully equal to any flock of sheep in the country for raising stock. The ewes, aside from raising a lamb each, sheared last June, upon an average, 4 lbs. 4 oz. of well washed wool—perfectly clear from gum. The wool was sent to Samuel Lawrence, Esq., of Lowell, and pronounced by him to be the right kind of wool for our farmers to raise—being the most profitable.

Satisfactory evidence of the blood can be given. Apply to the subscriber at Williston, Vt., or A. B. Allen, 187 Water-st N. Y.

THOS. H. CANFIELD.

March 1—2t.

QUINCY HALL AGRICULTURAL WAREHOUSE AND SEED STORE, BOSTON.

(Over Quincy Market, South Market-St.

RUGGLES, NOURSE & MASON, wholesale and retail dealers in Agricultural and Horticultural Implements, Machinery, and Seeds.

Also manufacturers of the celebrated WORCESTER EAGLE, SELF-SHARPENING, HILL-SIDE, and SUBSOIL PLOWS, and other implements, at Worcester, Mass. As their stock of implements are mostly made either by themselves at their extensive works at Worcester, or by other manufacturers especially for their trade, their assortment far exceeding in variety and quantity any establishment of the kind in this country, and being *sole agents* for the makers of several important implements of much notoriety and usefulness, they are enabled to offer very great advantages and facilities to Planters, Farmers, and Dealers.

To their before extensive assortment of Plows, they have recently added several patterns, embracing new and *important improvements* in form, construction, and fixtures, which adapt them to both shoal and extra deep plowing. Their particular form to take up the furrow slice, and turn it over in the most perfect manner, with the least *power of draft*, leaving the soil in the best possible condition for after cultivation, and production of crops, the acknowledged and unexampled strength and durability of their castings and fixtures, the uniform construction and superior finish of the wood by machinery used only by themselves, are among the peculiar characteristics of their plows.

By the combination of the *Dial Clevis*, recently patented by themselves, and the draft rod, the plow is easily arranged to make *extra deep* or *shoal work*, at the option of the operator.

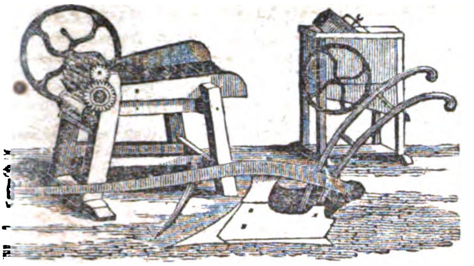
FIELD, GRASS, GARDEN, FLOWER and HERB SEEDS, which are raised by the most experienced American and European Growers, particularly for their trade, and can be relied on as genuine and fresh, and will be packed to order, at wholesale and retail, with labels of instruction relative to the time of planting and mode of culture.

Agents for the principal nurseriec in the vicinity of Boston and New-York. Guano, Poudrette, Bone Dust &c.

Catalogues containing descriptions and cuts of their extensive stock of implements and machines; also, catalogue of Garden and Field Seeds, and Grains, embracing directions for their cultivation with general observations, remarks on soils, and fertilizers, their properties and application; and upon the propagation of Fruit and Ornamental trees: the whole comprising nearly 100 octavo pages, may be had gratis on application by mail or otherwise.

Luther Tucker, sole agent at Albany, Nos. 10 and 12 Green-St., and A. B. Allen, for New-York City, No. 187 Water-St.

March 1—2t.



JOHN MAYHER & CO.

U. STATES AGRICULTURAL WAREHOUSE,

No. 195 Front-street, (near Fulton,) New-York.

Foundry and Machine Shop 502 *and* 504 *Water-st.*

THE subscribers respectfully invite the attention of Merchants and Dealers in AGRICULTURAL IMPLEMENTS to the superior assortment of goods which they manufacture, embracing Plows and Castings of the most approved kinds in use, and possessing all the latest improvements in style, workmanship, and material, among which are the following articles, that can be seen at their warehouse:

Pitts' Corn and Cob Crusher. Price, $40
Sinclair's do.—hand or horse. $30
Fitzgerald's Patent Burr Stone Corn Mill, $60
Sinclair's Cast Plate Corn Mill, $40
Swift's Corn, Coffee, and Drug Mill, $6 to $8
Hovey's far-famed Hay, Straw, and Stalk Cutter;
Sinclair's Hay, Straw, and Stalk Cutter;
Greene's do. do. do.
Mayher & Co.'s do. do.
Langdon's do. do. do.
I. T. Grant & Co.'s Premium Fanning Mill;
J Mayher & Co.'s do. do.
Boston Centre Draught Premium Plows,
Bergen's Self-Sharpening Plows;
Dutcher's Plows of all kinds;
Hitchcock's do. do.
Freeborn's do. do.
Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price, $55
do. do. 4 do. $75
do. do. 2 Thresher, $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
Warren's do. do.
Sinclair's Corn Sheller and Husker;
Pitt's Horse Power and Threshing Machine;
E. Whitman's Jr., Thresher and Separator;
Subsoil Plows of different kinds.

Cultivators, Wheelbarrows, Canal Barrows, Store Trucks, Horse and Ox Carts, Mule Wagons, Ox-Yokes and Bows, Hames, Trace and Ox Chains, Road Scrapers, Ground Augurs, Shovels, Spades, Pick Axes, Hay and Manure Forks, Rakes, Hoes, Scythes, Scythe Snathes, Grain Cradles, Crow Bars, &c., &c., all of which will be sold as cheap as they can be bought at any other store in the city, and are warranted.

Gin Gear, Segments, Rag Wheels, &c.

Castings of all kinds made to order. March 1, 1847—tf.

TO NEW-YORK FARMERS AND EMIGRANTS.

ONE hundred and fifteen thousand acres Illinois Lands for sale, in tracts of 40, 80, 120, 160 acres, or more, to suit purchasers. The lands are all first rate, and among the very best in the state, and are situated in the counties most densely settled, viz., Morgan, Scott, Cass, Mason, Menard, Green, Sangamon, Logan, Christian, Mason, McLean, Woodford, and Macoupin. To actual settlers every reasonable indulgence will be given as to time of payment. The price from $3 to $5 per acre.

A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

" *Beardstown, Cass Co., Ill., Jan.* 10, 1846.

THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

" A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

" Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYRES, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG,

Jan. 1, 1847.—6t **No. 9 North Fourth-st., Philadelphia.**

WIRE CLOTH SIEVE AND SCREEN MANUFACTORY.

THE subscriber has constantly on hand a large assortment of the above articles, which he offers at the lowest market prices. D. L. CLAWSON.

July, 1846—10 mos. 191 Water-st , New-York.

P. S.—All kinds of wire work manufactured to order.

HIGHLAND NURSERIES.

NOTICE.—A. J. DOWNING having retired from the Nursery business heretofore conducted at Newburgh under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which these Nurseries have had, for a long time, but, as the present stock is gradually drawn from Mr D.'s grounds, they will greatly enlarge the Nurseries, and endeavor fully to meet the constantly increasing demand for the trees grown here.

Orders addressed to the subscribers *post-paid* will receive prompt attention, and all trees, shrubs, plants, &c., will be carefully packed and shipped to any part of the Union. A. SAUL & CO.

Highland Nurseries, Newburgh, Feb. 15, 1847.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. SAUL, who has been at the head of this department here for the last eight years, and his accuracy and fidelity in the propagation of fruits and general care of the Nurseries, during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted.

A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15, 1847. Mar-1t

ALBANY SEED STORE,

No. 10 *Green-Street.*

THE subscriber has now on hand at the above establishment, a general assortment of FIELD, GARDEN, and FLOWER SEEDS, warranted of the best quality, and which will be sold at as low rates as at any place in the country. Among the assortment, are the following:

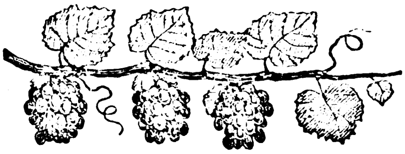
GRASS SEEDS.—Timothy, Orchard, Red Top, Western, and Northern Clover, &c., &c.

SPRING GRAINS.—Black Sea Wheat, Rye, Barley, Buckwheat, Millet, Peas, Indian Corn, &c., &c.

ROOTS.—Hall's Early, Carter, and other kinds of Potatoes—Altringham, Long Orange, and Large White Carrots—Ruta-Baga, Mangold Wurtzel, Sugar Beets, &c., &c.

GARDEN AND FLOWER SEEDS of all kinds.

March 1. LUTHER TUCKER.



ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D. 326 Broadway, New-York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards, and nurseries, by improved cultivation, pruning, &c, that they will generally ripen well, and produce good fruit when planted in most of the northern, and all the western, middle and southern states.

New-York, March 1—2t.

HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing, Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price, $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.

Albany, Jan. 12, 1846. LUTHER TUCKER.

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BUCKTHORN HEDGES.

FIVE THOUSAND Buckthorn Plants, one year old; also Buckthorn Seed, for sale at the Albany Ag. Warehouse.

Albany, April 1 LUTHER TUCKER.

INOCULATED PEACH TREES.

AN assortment of the best varieties, and a few trees not inoculated, raised from stones brought from South America.

Asparagus Roots, of two and three years thrifty growth. For sale by ISAAC ROOSEVELT.

March 1, 1847—1t* Pelham, New Rochelle P. O., N. Y.

GUANO.

200 TONS Ichaboe Guano, balance ship Shakspeare's cargo, the best ever imported in the country, for sale in lots to suit purchasers, by E. K. COLLINS, 56 South-st.

April 1.—tf.

AG. WAREHOUSE AND SEED STORE,

Nos. 10 and 12 Green-st., Albany.

FOR sale, at all times, at the above establishment, all kinds of Agricultural and Horticultural Tools, Implements, and Machines, from the best manufacturers, and at as low prices as at any establishment in the country.

Plows of all kinds and sizes;
Harrows and Cultivators, of different kinds;
Manure Forks, Shovels, Spades, Hoes;
Horse Powers and Threshing Machines;
Corn Shellers, Straw Cutters, Corn and Cob Mills;
Drill Barrows and Corn Planters;
Fitzgerald's Portable Burr Stone Mills;
Harvesting and Haying Tools of all kinks;
Ox Yokes and Bows, Draft, Tie-up, and other chains;
Grant's and other Fanning Mills.

Garden Rollers, Ladies' Weeding Trowels, Grass Shears, French pattern, Border Shears, Garden Reels and Lines, Budding and Pruning Knives, Garden Rakes, Hay Knives, Transplanting Trowels, Pruning Saws, various kinds, Bark Mills, Sugar Mills, Bush and Bill Hooks, Root or Vegetable Cutters, Bull Rings, Axes and Hatchets, Patent Axe Handles, Wheelbarrows, Anti-Friction Rollers, Slip Scrapers, Spinning Wheels, Reels, Smith's Corn Sheller, Burrall's Corn Sheller, &c.

Churns, Cheese Presses, Tubs, and Pails, &c., &c.

Together with a general assortment of Field, Garden, and Flower Seeds, Seed Corn, Choice Potatoes, &c., &c.

April 1. LUTHER TUCKER.

POUDRETTE.

THE Lodi Manufacturing Company offer their Poudrette for sale the following season at *reduced* prices, viz: In barrels delivered free of cartage, at any wharf or place in the city of New-York, at the rate of $1.50 per barrel, for any quantity over 7 bbls.; (under 7 bbls., $1.75.) In *bulk*, at the factory, on the Hackensack river, where vessels drawing 8 feet of water can come, it will be delivered at the rate of 25 cents per bushel. Planting 4 feet apart, each way, 2 barrels or 8 bushels of Poudrette will effectually manure an acre of corn, and will vie in cheapness and efficiency with any manure now in use.

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March 1, 1847—tf.

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March 1—2t.

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, MAY, 1847. No. 5.

MAKING AND PRESERVING BUTTER.

EVERY farmer may have noticed that the price obtained for whatever he has to sell, always depends more or less on the quality; but in nothing, perhaps, is this so particularly conspicuous as in the article of butter. Double or treble the price is readily obtained for some butter, that poor or ordinary butter will bring. In the New-York and Boston markets, the price of butter ranges from eight to twenty-five cents per pound. We could name dairies, the butter from which has brought from twenty to twenty-five cents per pound, for years in succession. Now this difference is caused by *quality*, and how important it is that this principle should be duly regarded.

The first important requisite in the manufacture of good butter, is, that the milk be kept in a proper temperature, and this, experience has proved to be from 50 to 60 degrees. To secure this temperature, the milk-room must be protected as much as possible against the violent heat of the sun, and it should at the same time admit of a free circulation of air, as this facilitates the separation of the cream from the milk. A cool upper room, an airy cellar, or a "spring-house," may be made use of, according to the location. If running water of sufficient coldness can be had, it would be preferred, in warm weather, to set the pans of milk in troughs of stone or wood, through which the water should constantly flow. The writer is aware that a prejudice is entertained by some against "spring-houses," but the unfavorable opinion in regard to them was probably derived from those which were badly constructed, or not properly ventilated. A committee of a Vermont agricultural society, in an elaborate report on butter-making, drawn up a few years since, recommended that the pans of milk be set in troughs of cold running water, till the animal heat had passed off, and after it had cooled, to place the pans in water heated to the temperature of 170 degrees, taking care that the milk should not boil or simmer—the pans to be afterwards set back on or over the troughs—*not in the water*. It was stated that this process had been fonnd to so hasten the rising of the cream that it would all rise, and could be taken off in half the time ordinarily required, and that it also improved the quality of the butter by preventing the sourness of the milk and cream. The time occupied in heating the milk of twenty cows, is said to be twenty-five to thirty minutes. We cannot from experience, speak of this mode of managing milk and cream, but having some practical acquaintance with butter-making, we should not doubt its success.

We believe it to be well established, that to produce the very best butter, and especially that which will keep longest, the cream should be perfectly sweet when churned. Some experiments, very carefully conducted, some years since, by Dr. TRAILL, of Edinburgh, and published in the Transactions of the Highland Agricultural Society, clearly lead to this conclusion.* and we believe it is supported by the observation of the best butter-makers in this country.

The practice of churning the *milk and cream together* is followed in some sections. Its advantages are, that in warm weather, or when the milk is kept in a high temperature, more butter is obtained than if the cream only was churned. We are not aware that any other advantages are claimed for this mode; and those who have tried both, churning the milk and cream together, and the cream alone, state that if the cream rises well, it affords as much butter as is obtained from the milk and cream. It is true that in regard to the experiments of Dr. TRAILL, before referred to, he concludes that churning the milk and cream together after they have become slightly acid, seems to be on the whole the most economical process; but the reason he gives for it is, that "*it yields a large quantity of excellent butter-milk*," which is largely used as an article of diet in Scotland, and is of considerable consequence as a source of profit, being constantly sold in the markets. Where the milk and cream are churned together, it is usual in this country, to allow the milk to stand till it is curdled, but not till whey rises to the top. The best butter-makers are very particular in regard to this, and are always careful to have the milk churned at the particular stage mentioned.

Working Butter.—The object in working butter is to free it from the butter-milk, and the *caseine* or cheesey particles, which, from their tendency to putrefaction, prevent the butter from keeping sweet. To effect the separation to the best advantage, it is important that the butter should have, when it first "comes" in the churn, a considerable degree of solidity, and that the particles should have a tendency to cohere. This will generally be the case, provided the milk and cream has been kept in a temperature sufficiently cool, and is not too much heated in churning. And it may be well to observe here, that the cream or milk should not be raised in churning higher than 75 degrees, and that it will be necessary to bring it to about 55 degrees, before churning will be attended with much advantage. The use of the thermometer in making butter, as well as in making cheese, is now regarded as almost indispensable.

Some butter-makers, whose butter is noted for its excellence, pursue this course in working it: as soon as the butter is taken from the churn, it is beaten together by a ladle or spatula, and afterwards worked in a brake, similar to what is described in the last volume of the Cultivator, pp. 187, 240. The salt is then added, and it is set in a cool place for a day or two, when it is worked over once more, but care is taken that it is not worked *too much*, as it renders it oily and injures its flavor.

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* "Butter from sweet cream has the finest flavor, and appears to keep longest without acquiring rancidity."—Conclusions of Prof. TRAILL, in reference to his experiments on butter-making. *Transactions Highland Society*, for 1843, p. 23.

Washing butter, when first taken from the churn, is a practice the propriety of which has been considerably controverted; but perhaps the true reason or it is not always understood. When the weather is warm, or the milk and cream has been exposed to too high a temperature, the butter is apt to "come soft," and in this state it is very difficult to work it properly. The use of cold water, in such cases, is to harden the butter and facilitate the expulsion of the butter-milk. It is of the greatest importance that butter be properly worked, for on the perfection of this part of the process, or the entire separation of the oleaginous from the serous and cheesey particles, its keeping quality greatly depends. There seems, therefore, to be no objection to the use of water, when butter is in the condition above mentioned; but it would, on the contrary, appear to be decidedly useful in such cases.

But the question presents itself—Suppose butter could be properly worked and the butter-milk thoroughly expelled without the use of water, would washing be expedient?

Practical results, so far as the knowledge of the writer extends, furnish a negative to this question. If the milk and cream has been kept in a proper state, and is not too much heated in churning, the butter will generally "come hard," and may be readily worked in a thorough manner without water. Trials have been made by dividing parcels of butter, produced under such circumstances as are here mentioned, washing one portion and working the other without washing, and the *unwashed* portion has been found to keep sweet the longest; and the fact is deemed to be well established, that butter which "comes" sufficiently solid, is injured by being washed in water. In the best dairies of Europe, the practice is not approved. In the chapter on "Butter," in the "British Husbandry," it is remarked in reference to washing, that it "is a practice not to be commended, and in many dairies has been relinquished." In the "Farmers' Series," in the account of a "Gloucestershire Vale Farm," which is said to be conducted with superior management, we are told—"it is found by *long experience* that butter retains its sweetness much longer when no water is used in making up."

Upon the whole, we would restrict the washing of butter to those cases where the butter-milk could not be expelled without it, and would prefer that course of management which would obviate the necessity of using water for this purpose.

Dr. **Philip Physick**, of Germantown, Pa., who for several years in succession received the first premium of the Philadelphia Agricultural Society, pursues the following mode in working butter. When the butter is taken from the churn, it is laid on a clean linen cloth spread out as flat as possible, and not more than two inches thick. A bag of pulverized ice, about half a peck in quantity is provided, and on this is placed the cloth which has the butter on it, where it remains till the butter is quite hard; it is worked on a marble slab, with a wooden spoon or ladle, having a linen cloth next the butter to take up the butter-milk.

Salting.—The best rock salt, made perfectly fine, ought always to be used, if it is wished to keep the butter long. A great deal of butter is spoiled by using impure salt. The loss to the farmers of this state from this cause, is annually very great, and it is felt to a serious degree in all the western country. It is the opinion of experienced dealers in butter, that the price of a large portion of that which comes from the west and is sold in the eastern cities, is injured to the amount of six to eight cents per pound by the use of bad salt.

Less than an ounce of the best Turk's Island or St. Ubes salt, is sufficient for a pound of butter. In some good dairies, fourteen ounces of salt are used for sixteen pounds of butter. Sugar and saltpetre have been tried, but experience has shown that they are of no special benefit. The salt should be intimately incorporated with the butter when it is first taken from the churn, and the butter should then be set in the dairy-room for twenty-four hours, when on working it over again, it will be found firm and solid. If intended for long keeping, the butter should be packed in well glazed stone jars, or well seasoned white-oak firkins. Smaller parcels are generally preferred than it was formerly common to put up. From twenty-five to fifty pounds is the quantity usually wished in a jar or firkin. It is recommended to keep a strong brine on the butter, to the depth of an inch.

The preservation of butter depends more on the total expulsion of all extraneous ingredients, and on its perfect exclusion from the air, than on the quantity of salt with which it may be mixed. It is prepared in England and sent to India, with but very little salt, and sometimes without any. For this purpose it is purified by melting before it is salted and packed. Loudon thus describes the process: "Let the butter be put into a proper vessel, and this be immersed in another containing water. Let the water be heated till the butter be thoroughly melted; let it continue in this state for some time, when the impure parts will subside, leaving at the top a perfectly pure transparent oil. This, when it cools, will become opaque, and assume a color nearly resembling that of the original butter, being somewhat paler, and of a firmer consistence. When this refined butter is become a little stiff, the pure part must be separated from the dregs, and be salted and packed up in the same manner as other butter; it will continue sweet much longer in hot climates, as it retains the salt much better than in its original state. It may also be preserved sweet without salt by adding to it a certain portion of fine honey, perhaps an ounce to a pound of butter, and mixing them together thoroughly, so that they may be perfectly incorporated."

Farmers' Barometer—Humbug.—Some of the papers have given or copied directions for constructing a very simple and cheap barometer, by balancing a sealed bottle on one end of a rod, by a metal weight on the other. The air confined in the bottle always remaining the same, it is evident that when the atmosphere is light, the bottle will sink, and when it is heavy, the bottle will rise. This is interesting in theory, but to show that the inventor never successfully reduced his theory to practice, a simple calculation only is necessary. Suppose the bottle contains a hundred cubic inches, the enclosed air would weigh thirty grains. The column of mercury in the common barometer being about thirty inches, in falling *one inch* it would in effect add only *one grain* to the weight of the air in the bottle. But a depression of the mercury only the tenth of an inch often affords an important indication in the weather. The question now arises, would the tenth of a grain move a balance readily and conspicuously which supports a three-pint bottle? The answer is most obviously in the negative. Hence the impracticability of this proposed barometer. With a smaller bottle the difficulty is only increased. T.

Waste of Manure in Cities.—The London sewers pour daily into the Thames, 115,000 tons of mixed drainage. One part in 30 is regarded as rich, fertilizing, solid manure, or 3,800 tons daily. This amount would richly manure every year more than 50,000 acres of land.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

RURAL NOTICES ABROAD—By Caius.—No. IV.

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Italian Agriculture Continued.—As one goes north from Rome, through the Papal territory, he finds gradual improvement in cultivation. The huge old houses which he at first passes in crossing the Campagna, have a ruinous and deserted aspect. The stables are open; the cattle-yard neglected, and all its fertilizing materials lost. Immense deposits of manure in the neighborhood of the great inns upon the route, are rotting in the sun; the fence that was once built about the garden is broken down; cattle and pigs are in the road, or house, or stable, as pleases them best; and perhaps a sickly looking patch of grain is waving upon a knoll near by, with two or three ragged and begging boys to guard it. As the Campagna rises into hills toward the north, the fields have more care; olive orchards are set upon the slopes, and patches of clover and lucerne appear. The vine, too, now shows itself, and at first growing stragglingly from the trees, it is trimmed farther on with neatness. The villages that are situated in the valleys of the mountain range, are abundantly supplied from the hill-sides around them; and the occasional plains, of a higher level than the Campagna, such as that about the old town of Terni, in the neighborhood of the famous falls of that name, are both rich and well cultivated. This valley of Terni, watered by the Velino, produces three full crops of grass in a year. The mulberry is grown extensively, and there are considerable silk manufactories in the town; it may be, indeed, that the reader is wearing this moment a black cravat, woven in that old Papal town, from cocoons spun within sound of the roar of the waterfall,—by worms fed on leaves that have glistened with the spray that there mounts the skies—

> ——" and thence again
> Returns in an unceasing shower, which round,
> With its unemptied cloud of gentle rain,
> Is an eternal April to the ground,
> Making it all one emerald."—*Childe Harold. Des. of Terni.*

Passing farther north, the sides of the mountains are wooded with Chestnut, not unlike our tree of the name, and the Ilex, or live oak, which never approaches in Italy the size of the same tree in our Southern forests. The deciduous oak also shows itself here and there, and near the city of Spoleto is a famous grove of immense sized trees, one of which is said to be not less than fifty feet in circumference. The fields, where uncultivated, are tufted with a beautiful blooming heath, with white blossom, and white downy stalk. The flowers generally of the Appenines, are varied and beautiful; among others, is one not unlike our fragrant orcus.

The valley of Clitumnus, to which I have before referred, is distinguished for its beauty and fertility. Its river, the *Clitumno*, bursts forth in a body from the base of a limestone mountain, and is clear and cold. I drank from one of its many bubbling fountains, on a hot day of April, (17th,) stretched upon the green turf. The beauty of the water is proverbial;—

> " the most living chrystal that was e'er
> The haunt of river nymph,—
> thou dost rear
> Thy grassy banks whereon the *milk white steer*
> Grazes."——

And they are there yet—all through the valley, under the spreading elm trees, and standing beside the tall poplars, those most beautiful cattle of Europe. The herbage is no where richer, or more luxuriant; it was celebrated in the Georgics,* and by Horace. The maize is seen in this valley growing abundantly, and the vine is thrifty, though the wine made from it is by no means famous. Around Perugia, which sits like a queen upon its hill, the plains are even better cultivated than in the lower valley of Clitumnus. The vines are more closely trimmed, and the ends are curiously braided together. The plows are far better than southward, and the white oxen work well under the yoke. The carts are as good almost as Scotch carts, and all fertilizing materials are carefully preserved. Rye I saw flourishing and fully headed in early April; and the peculiar clover of the region in blossom. Its leaf is similar to that of our species, but the flower is a deep crimson, spiral shaped, and sometimes two inches in length. And these bright crimson tassels, when waving over a broad field, offer one of the richest sights that can meet the agricultural eye in Italy. The working people seemed to me better dressed in the neighborhood of Perugia, than in the other Papal regions, and in the immediate vicinity of the city, are sweet little valleys, so richly cultivated, and so set off with quiet looking homes, that one might half believe himself looking upon an English landscape.

"Reedy Thrasimene" is a beautiful lake, lying near the borders of the Papal and Tuscan dominions. Its banks are flat and sedgy, and a proposition is now on foot to drain its upper shores for cultivation. Judging from what now appears of the fertility around, the cost would be richly repaid. The olive produces large crops upon the slopes of the hills, and its trimming is nice and peculiar. Every portion of decayed wood is most carefully cut away, and one frequently sees a mere shell of a trunk, from which all decayed substance has been removed by scraping, putting out thrifty boughs, laden with the largest and finest fruit. For those unacquainted with the tree, I may say its general size is between the peach and the apple tree, though less graceful in appearance than either. Its leaves are oval. of the color of the sage leaf, and with the same velvety surface.

Amid olive orchards, and upon the borders of Thrasimene, the road winds, and crosses the brook Sanguinetto, famous from Hannibal's battle, and enters the dominions of the Grand Duke of Tuscany. The Duke is a better farmer than was the old Pope: the roads, too, are better as one rides into Tuscany. The peasantry are better dressed, and with their neat Tuscan hats, have a cheerful and picturesque air. The vines are neatly dressed and trimmed, and hang in braids or festoons from the trees. Wheat and rye is waving beneath, and rich fields of clover, full grown, are nodding crimson heads, and their leaves are glittering with rain drops.

But such cultivation belongs only to the richer valleys; winding up long hills, on which grow clumps of ilex and chestnut, and over heaths untilled, the fertility vanishes. And perhaps the great inn where you stop for the night, has only about it a poor cabbage garden.

I stopped at such an inn, at dark, in an April night, and the reader, if he chooses, may look into the kitchen of an Italian inn. It is long and low, and the roof is heavily timbered, and blackened with smoke. Hams are dangling here and there from the beams. About the sides, are the various implements of cooking, and a cupboard of their rude dishes. The heavy old fireplace, has a little blaze glimmering in front. In the middle

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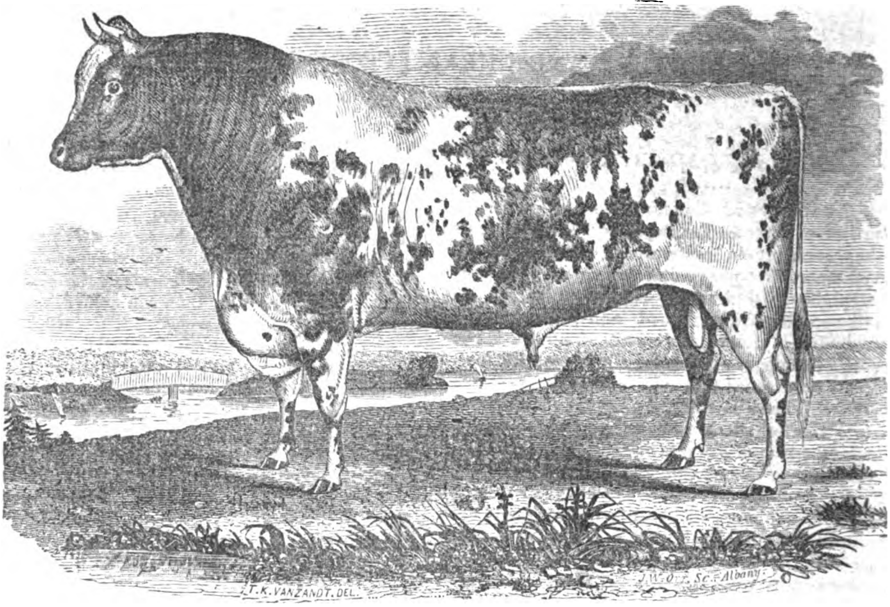
* Hinc albi, *Clitumne*, gregres, &c.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of the room, upon the stone floor, is a long oaken table, and at one end is the master of the house, in long shirt collars and broad-brimmed hat, chanting the passion of Gesu Christo. Two men sit near him intent upon the sounds, and two others below, are listlessly hanging over the board, and the vetturini, in their blue shirts, form a group at the end. The women are hurrying through their arrangements for the night with earnest looks, and as the solitary candle flickers over the faces of the host and his listeners, and the red glow of the fire fades and brightens on the blackened beams above, and the dark stone floor below,—you have a picture for brigand dreams. And a likely enough place it was for such brigand phantasy, for the inn stood alone, with scarce a house in sight, and the mountains rolled up gray around it.

COLMAN'S EUROPEAN AGRICULTURE--PART 8.

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FROM what had been stated in a former portion of this work, we were led to expect that this part would be devoted almost entirely to the subject of Live Stock; and considering the great interest with which this branch of English husbandry is generally regarded in this country, and the fact that it is, as Mr. COLMAN declares, "one of the most important topics connected with British agricultural improvement," we confess to some disappointment in finding it disposed of in the brief space of forty-three pages. But some of the motives which influenced him in this summary disposition of the subject, may perhaps be inferred from the following remark: "Among the conflicting opinions and estimates which prevail, both in this country and the United States, in respect to different breeds, my judgment may be viewed with jealousy and suspicion, and I may have to encounter fierce prejudices of breeders and speculators." He informs us, however, that his "opinion will be given without any pecuniary bias whatever," and that he has endeavored to give the "result of his various inquiries and observations, in as impartial and simple a form as possible," a course to which we have not the least doubt he has faithfully adhered.

He observes that the mind of the traveller is strongly impressed with the distinct character of the breeds of animals which occupy different localities in Britain, and the perfection of form which several of them have attained. He says—"The science, or perhaps it may be called the *art* of breeding, has been greatly studied;" but he thinks that notwithstanding the success which some men have attained in it, "a great deal remains to be understood and explained." As evidence of this, he adverts to the practice of "in-and-in" breeding, the propriety of which he thinks is still a mooted question. He admits, however, with most persons who have devoted much attention to this subject, that the great point in breeding is the selection of animals possessing the qualities which it is wished to perpetuate. "The great law that like produces like, though it may not be invariable, is comparatively of universal operation. Good qualities are propagated by the union of animals possessing good qualities; and defects, and faults, and infirmities, are in like manner extended and aggravated. The application of this principle or physical law, has in this country been most marked in its results. * * * The old proverb certainly holds true, that 'a good cow may have a bad calf;' but then it is much more likely that she will have a good one, than that a bad cow will have a good calf. The confidence with which some persons speak of what can be done, and what they can do, is often excessive; but what has been accomplished by selection, by crossing, and by the conjunction of peculiar properties, is surprising. There seems to be a limit beyond which no person can go. The particular breed may be altered and improved; but an entirely new breed cannot be produced; and in every departure from the original, there is a constant tendency to revert back to it."

HORSES.—Mr. COLMAN observes that in England, horses are trained for and exclusively confined to particular departments. "So we find the race-horse, the hunter, the carriage horse, the draught horse, the roadster, the saddle horse, the pony for children and ladies, the general hack, and the farm-horse. This comes of the immense wealth of the people, and is adapted to give them the best advantages of each kind."

The treatment of horses in England is spoken of as being generally of the kindest nature. He gives some

Hereford Cow "Matchless."

interesting examples of this. "At the house of an eminent nobleman," he observes, "whose hospitality I enjoyed, it was the invariable custom of the family—ladies and guests, as well as the master—about 9 o'clock in the evening, to go by a covered passage, into the stables where thirty horses were kept, to see that the grooms and others were at their posts, that the horses were well cared for, and the stable in good order. * * * At one of the principal breweries in London, where forty of the largest size dray-horses were kept, the manager informed me that after six years of hard service, the horses receive their freedom, are sent into the country, exempted from all labor, and kindly cared for during the remainder of their lives. I confess, in observing these kind provisions, and this extraordinary care, I have not been able to suppress the wish, that many of the bipeds who share with these animals the labors of the field,—not unfrequently performing the hardest part of it—would experience in their own persons, an equal care, and find in their cottages on their return from a hard day's work, even a moiety of the comforts with which the stables of their co-laborers are provided. It would be doing great injustice to say that this is not often done by many persons who have no greater pleasure than in providing for the comfort and welfare of their dependants. It is only to be regretted that the practice is not universal."

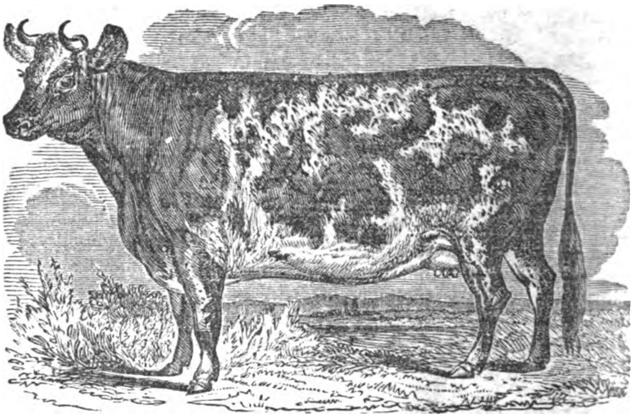
"There are three breeds of horses in the kingdom, distinguished for their valuable properties as farm-horses;—these are the Cleveland Bay, a horse of great strength, and good size and figure; the Suffolk Punch, a large and serviceable horse; and especially the Clydesdale horse, almost exclusively preferred among the excellent farmers of Scotland, particularly in the Lothians. I have seen nothing superior, in my humble judgment, to the last horse, for farm labor, compactness, strength, and action. * * * The horses belonging to the Queen's Guards, which are often to be seen in the streets of London, and always on state occasions, are beautiful animals, and subjects of universal admiration. They are of a black color, and bred, I believe, on the continent, purposely for the army."

We are informed that in farm labor, horses are only worked about eight hours per day. As to feed, the general daily allowance is stated to be "a peck of grain, half oats, and half beans, and from fourteen to sixteen pounds of hay." In plowing, an acre a day, is considered, on an average, a day's work for a pair of horses; but the furrows are narrow, from eight to ten inches in width, and the distance travelled by the horses in such cases, is from twelve to sixteen miles a day Oxen are not much used for labor in England. and the few which Mr. COLMAN saw seemed not to be well managed, being in this respect decidedly behind the best New England teams of this description.

NEAT CATTLE.—Mr. COLMAN informs us that the principal breeds of cattle which have fallen under his notice, are the Improved Short-Horn, the Hereford. the North and South Devon, the Staffordshire Long-Horns, the Ayrshire, the polled Aberdeenshire. and Galloway, the Kyloe, or West Highland, and the Kerry. The different breeds. it is said, have their exclusive partisans.

Of the *Improved Short Horns*, it is observed that they "are the most popular breed in Great Britain. In perfection, they are of large weight, fine boned. come to maturity early, exhibit great proof upon being killed, and though they are admitted to be great consumers. and require very high feeding, they are considered a very profitable stock for the farmer. They are commonly brought to market before three years old, and often at eighteen months. The best of these animals have a strong natural tendency to keep fat, but they are not suited to a short pasture or a scanty manger. The high-bred animals are not remarkable for their milking properties. There are exceptions; but most of these animals are inferior in the quantity and quality of their milk." He admits, however, that "individuals of rare excellence may be *selected* from among them."

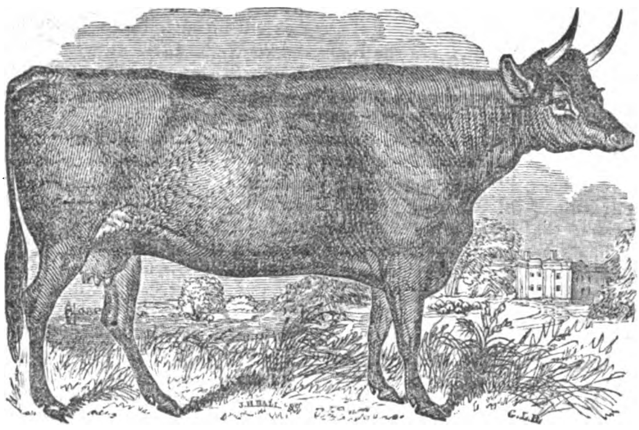
The *Herefords* are spoken of as the rivals of the Short-Horns. "It would be difficult," he observes, "to adjust the rival claims between these two great breeds. The Hereford cattle are exceedingly neat in their limbs and form, and of good size. At the show of the Smithfield Club, held at Christmas, the highest prizes appear to alternate between the Short-Horns and Herefords. Under proper treatment, they may be brought to as early maturity as the Short-Horns. They are not so great consumers as the Short-Horns, and their thrift is remarkable. Some farmers in England prefer them as fattening beasts to the Short-Horns. My observation inclines me to the belief that, in equal numbers, there are as many good Herefords as Short-Horns; and the thriftiness of many of them is quite remarkable. In respect to handling, observing persons know that, in this matter. there is every diversity among animals of the same breed; and that it is rather the characteristic of individuals than of a tribe. but I may hazard the general remark. that, as a breed, few animals handle better than the Herefords." He states that in general, the Herefords rank low as dairy stock.



Ayrshire Cow.

though they are in some instances considered good milkers.

The *North Devons*, Mr. C. speaks of as "exhibiting the perfection of form and symmetry, with soft silky coats, and with hair in curled and waving lines, in appearance like the most beautiful varied mahogany that ever came from under the plane of the cabinet-maker. The South Devons are animals of a much larger frame, often coarse-boned, attaining sometimes to a considerable size, not remarkable for thrift, coming late to maturity, and in truth, identical with the great mass of cattle to be found in New-England." [We trust those persons who claim that the "native" or common New-England cattle are of Devonshire origin, will particularly observe Mr. COLMAN'S remark, that it is *South Devons*, not the beautiful North Devons, that the "native" cattle most resemble.—EDS.] "The North Devons are, as a breed, most highly and deservedly esteemed." Mr. C. states they are generally preferred for labor, being active, strong, and hardy. It is generally believed that they do not come to maturity as early as the Improved Short-Horns and Herefords. Their meat is very highly esteemed in the Smithfield market.



Devon Cow.

The *Ayrshires* are pronounced a beautiful breed, fully as distinct, in Mr. Colman's opinion, as the Short-Horns. They are valued chiefly for the dairy, but the cows, when dry, fatten very easily, and when fatted, the four quarters weigh from 480 to 720 lbs.

The *West Highlanders, or Kyloes*, are a small breed, bred in the remote Highlands of Scotland, and on the northern islands of Britain. "They are short, hardy, thick set, always in good condition, and exceedingly thrifty, when brought from the short feed of the north, into the rich pastures and to the abundant mangers of the south. Their size is small, but their weight is very great in proportion, as they are extremely compact and solid. Their meat is esteemed of the best quality in the market, and commands, usually, half a penny per pound more than any other. They are sent to market at three years old." Mr. C. remarks that the shape of these cattle is so perfect, that the body would form, by taking off the head, neck, and legs, almost an exact parallelogram. He adds, also, that they are "universal favorites," and that no advantage has come from crossing these cattle with any other breed.

The Galloway and Aberdeenshire polled cattle, are spoken of as "highly profitable for thrift." The *Angus* breed, allied to the Galloways, are highly spoken of. He states that he saw a herd of cows of this breed at the show of the Highland Society, at Dundee, which exhibited the strongest indications of being the most abundant milkers, and in this respect, have, in his view, seldom been surpassed.

Of the *Alderney or Guernsey* cattle, which are bred on the Channel islands, Mr. C. says they are "in general, exceedingly ugly, small, thin, coarse-boned, and presenting little more than the skeletons of animals, covered with a yellowish, flabby, and coarse hide." But great, and very successful efforts have been made of late years to improve this breed, and as a specimen of what has been accomplished in this way, Mr. C. mentions an Alderney cow which was shown at the Royal Agricultural Society's meeting, at Southampton. This, he thinks, was the handsomest cow he ever saw—that is, she "gave the best promise of being what a cow should be. * * * She was rising two years old, of moderate size, compact, and well-shaped, of that yellowish dun color, which generally characterizes the breed, with a large and golden udder, ears of an orange color inside, a thin and clean neck, and the bright eye of a gazelle." This breed is valued chiefly for the extraordinary richness of the milk which the cows yield, and on this account are kept by noblemen and gentlemen for supplying milk, cream, and butter for their own tables, and Mr. C. says he has never had the slightest difficulty in recognizing their produce. A few of this breed of cows are sometimes kept in a large herd of cows of other breeds, in order that the milk of the Alderneys may give color to the butter and richness to the cheese.

Under the head of *milking stock*, Mr. COLMAN states that Yorkshire Short-Horns are generally kept at the London milk-establishments. Sometimes a cross of the Durham is used. The average quantity of milk for the year, at those establishments, is stated at eight quarts per day, for a cow. Their food is about eight pounds of hay, ten pounds of potatoes, and twenty pounds of mangel-wurtzel to each cow per day. Sometimes a bushel and a half of brewer's grains, forty pounds of mangel-wurtzel, and ten to twelve pounds of clover hay constitute the daily allowance to each cow.

"The Ayrshire stock," it is said, "are generally deemed the best milking or dairy stock in the kingdom. This" says Mr. COLMAN, "is a strong statement; my own observations, which were, however, of necessity, very limited, would make me hesitate in speaking so emphatically. Their general reputation is strongly in their favor." He states that he visited a dairy farmer in Ayrshire, who kept thirty-five very beautiful cows of this breed. "His best cows, in the best of the season, gave fifty-four pounds of milk per day. If, as is usually reckoned, a pint is a pound, this would be twenty-seven quarts per day. The average yield was forty pounds per day, or twenty quarts."

But the most productive cow for butter which Mr. COLMAN met in England, was a North Devon. She averaged for several weeks in succession, twenty-one pounds of butter per week. And the North Devon cows of Mr. BLOOMFIELD, a tenant of Lord LEICESTER, are stated to have averaged upwards of two hundred pounds of butter each, per year, for several years. This is the herd from which Mr. PATTERSON, of Baltimore, and the Massachusetts Ag. Society obtained their Devon stock.

The *Kerry* cows, of Ireland, are said to be greatly valued for their milking properties. Mr. COLMAN found, at a milk establishment near Cork, three of these cows which yielded an average of twenty-eight quarts each, per day, and it was stated to him on "respectable authority," that a clergyman in the county of Kerry, sent to Liverpool in one year, twenty-five firkins of butter, of sixty-four pounds each, the produce of five Kerry cows—equal to three hundred and twenty pounds per cow.

Some observations on "*Improvements in relation to the United States*," are deserving special notice. "That the stock of the United States is of a very mixed and miscellaneous character, every one must admit. Comparatively few attempts have been made in a systematic manner and upon an extended scale, for its improvement. Where they have been made, they have frequently failed for want of perseverance, very often for want of encouragement,—and have been sometimes met with the sneers of ignorance, or the derision of envy. The immense improvements which have been made here, strike the observer with grateful astonishment. Few subjects, in my opinion, more concern the interest of American husbandmen than the improvement of our live stock. Much, undoubtedly, may be done by the selection of the best from our own breeds, and by breeding only from the best; but our stock is so crossed and mixed up, and amalgamated, that it would be a difficult process to unravel the web, and go back to any original breed. We may certainly, with great advantage, avail ourselves of the breeds existing here in the highest state of improvement.

"In making a selection of breeds, it is plain that regard should be had to the locality where they are to be placed. The Improved Short-Horns, the Yorkshire, and the Hereford, are the best adapted to the rich and deep pastures of the Middle and Western States; the Ayrshire and the North Devon, seem to me especially suited to New England; while the West Highland cattle would evidently be fitted to the cold and least productive parts of the country."

"With us, as well as here, the success of farming must mainly depend on such a conduct of the farm as shall not exhaust its productive powers; or rather, that it shall, from its own resources, furnish the means, not only of recruiting its strength, but of actually increasing its capabilities of production. There is no more obvious way of doing this, than by consuming the produce of the farm, mainly, in feeding animals, through whom the riches of its vegetation may be returned in a form to furnish other and better crops."

We have not room in the present number for a notice of Mr. COLMAN's remarks on sheep and swine.

WEEDS INJURIOUS TO AGRICULTURE.

BURDOCK.

Lappa major, of Gaertner.
Arctium lappa, of Linneus.

DESCRIPTION.—Involucre globose, each of its subulate scales with an incurved hook at the extremity, leaves very large, petiolate. It belongs to the natural order Compositæ, and in the artificial system is placed in the class Syngenesia. Lappa is derived from *llap*, a hand, in Celtic, because it lays hold of everything near it.

GEOGRAPHY, HISTORY, &C.—It is a native of Europe, of the East Indies, and of Japan, growing in waste grounds, by road sides, and on ditch banks. According to London, "few quadrupeds except the ass, will eat the plant, but birds feed on the seeds, and snails and caterpillars on the leaves. The stems, stripped of their leaves before the flowers appear, may be eaten either boiled or raw, with oil and vinegar. Withering says, a decoction of the roots is esteemed by some equal to that of sarsaparilla. Burnt green, between the time of flowering and seeding, three pounds of the ashes produced sixteen ounces of very white alkaline salt, as good as the best potash." In the United States, it is found throughout the northern states, as far south as Maryland and Virginia, extending west to Kentucky and Illinois, growing in cultivated fields and waste grounds, especially around old buildings and fence sides. The leaves, when in a young state, are eaten with apparently a good relish by either cattle or sheep; hence, there is little danger of the plant becoming ripe in pastures. We have seen the green leaves given as a food to horses, at intervals of eight or ten days, the leaves being considered useful for purifying the blood, and preserving the general tone of health. This plant is a great pest among wool-growers, on account of the liability of the burs to become attached to the wool.

The best method of exterminating it is to grub up the roots soon after the leaves appear, or any time during the months of April and May, but the earlier it is done the easier it will be effected, because the ground is then softest. Many farmers intend to destroy it by cutting off the stems just before flowering in July or August, but then the business is liable to be neglected during the hurry of haying and harvest, or if done, the roots put forth new shoots, which bear flowers and burs. The roots are biennial. There are three other species of this genus described in Decandolle's Prodomus, all of which are natives of Europe or western Asia.

COCKLEBUR, CLOTWEED, OR BURWEED.

Xanthium strumarium, of Linneus.

DESCRIPTION.—Leaves cordate at the base, 3 to 5 lobed, largely dentate or incised. Fruit oblong, eliptical, terete, rather acute, covered with strait, sharp, rigid, hooked prickles; stem smooth, much branched, 3 to 4 feet high.

This plant belongs to the same natural order and artificial class as the preceding. The root is annual.

GEOGRAPHY, HISTORY, &C.—It grows throughout nearly the whole of Europe, and is also found in Siberia and Northern Africa, abounding by road sides and in cultivated fields. It is also frequent throughout both the northern and southern portions of the United States, having been apparently introduced from Europe; however, Nuttall says it is indigenous to the remotest portions of Upper Louisiana, but when we reflect upon the facility with which the seeds are often transported by adhering to the coats of animals, there is no difficulty in accounting for its wide dissemination, assuming what we have just advanced, that it has apparently been introduced from Europe. Certainly in western New-York, it has every appearance of being an introduced weed. In this country, it grows in cultivated fields; by the sides of water courses, and among rubbish collected around the outbuildings of the farm. It is a vile useless weed, and its burs are highly injurious to the fleeces of sheep.

It being an annual, it is easily exterminated, and hence is of little trouble to the farmer who takes pains to prevent its going to seed.

THORNY CLOT WEED

Xanthium spinosum, of Linneus.

Description.—Spines three parted, leaves three lobed, above minutely puberulent near the nerves, the under side clothed with a cinerous tomentum. Stem two to four feet high, pubescent, armed with sharp ternate spines; spines yellow. This ugly weed is also a native of Europe, being principally found in the south of France, Italy, the shores of Austria and Hungary, growing in fields and near roads. It has been introduced into the United States, where it is naturalized in places near the sea coast from Massachusetts to Georgia We have seen it growing abundantly in waste places near Richmond in Virginia. Happily it has not yet found its way into the interior of the state of New-York, but wherever it is found, it behooves farmers to try and arrest its further progress, and if possible, exterminate it, since it appears to be a greater nuisance in a farm-yard than the preceding species. It is an annual, fortunately for the good of the farming community in those sections where it abounds. Hence it must be comparatively easy to be destroyed

CANADA THISTLE.

Cirsium arvense of Scopoli.

Description—Leaves sessile, sinuate, pinnatifed, spinous, stem two to four feet high, paniculately branched with numerous flowers at the summit, involucre ovate, scales oppressed mucronated. Rhizoma extensively creeping; perennial.

Geography, History, &c.—This is one of the most troublesome weeds that infest the fields of the agriculturist, being a native of Europe, where it is frequent in vineyards and fields, especially in a clayey or a sandy loamy soil. It will not thrive in a very dry sandy or a gravelly soil, or where it is wet and peaty. It has been introduced into America from Europe, and grows more or less abundantly in various sections of the northern and middle states, and it abounds in Canada, Newfoundland, and on the banks of the Saskashawen. It is supposed it was introduced into the United States from Canada, and hence the common name. An instance is given in the Farmer's Magazine where the descending roots of this plant were dug out of a quarry 19 feet in length. The experiment of Mr. Curtis has been often related; he planted about two inches of the root in his garden, in April, and in the November following, it had thrown out stolons on every side, some of them eight feet long, and some of these stolons had thrown up stems five feet from the original root. The whole, when dug up and washed, weighed 4 pounds. Next spring between fifty and sixty young plants made their appearance near where the original piece was planted, which must have sprung from fragments that had escaped the search of the gardener the preceding fall, who is said to have been particularly careful in extracting them. Hence it may well be imagined how difficult it is to destroy the plant in cultivated fields, and how liable it is to spread by plowing, from the roots being carried by the plow, especially when the ground is rather wet. When in a growing state, it is rarely eaten by either horses, cattle, or sheep, excepting the flowers, which are sometimes nipped off by sheep. But when cut with other grass for hay, before or about the time of flowering, it is eaten by both cattle, sheep, or horses, during the winter. When it is cut before the plant arrives at maturity, the prickles become nearly harmless, after being wilted. It is said that before the introduction of turneps and naked fallows, in some parts of Scotland, this thistle, cut green and wilted, formed the evening meal of housed cattle during five or six weeks of every summer. The seeds are so easily transported by every wind as to cause its spread, when it has been once introduced, to be rapid and extensive.

To destroy it, summer fallowing and frequent plowing has been recommended; say let the ground be plowed from four to six times, during the summer. Such a course is very effectual, provided the season be dry. Seeding down land with the large red clover will also keep the thistles in subjection if the clover be kept for mowing; then the thick matted mass of clover smothers the thistles, except a few stunted stalks. It is a law of vegetable physiology that the leaves are necessary to the life of a plant, during the season proper for its growth and reproduction. The leaves are the lungs of the plant. This is the reason that mowing the thistles very low in a dry time, when they are in bloom, often destroys the plant—the soil being very dry, there is not sufficient life and strength in the roots to put forth new leaves, and the roots perish. If the leaves are destroyed a few times as soon as they make their appearance above ground, during the dry weather of summer, there is little doubt but that the entire plant will be destroyed.

S. B. Buckley.

West Dresden, N. Y., March, 1847.

GOOD FARMIMG—ROTATION.

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Morris Longstreth, in his late address before the Agricultural Association in Montgomery Co., Pa., gives an interesting example of successful farming. practiced by Jacob Sheimer, of Northampton Co., on the banks of the Lehigh. He adopted the system when a young man, and continued to practice it for thirty-five years, with a constant improvement in the quality of his land.

The farm contained one hundred acres, and was divided as nearly as possible into eight fields, of twelve and a half acres each. The whole was subjected to the following eight years' rotation :—

1. Fallow, manured, limed, and plowed three times;
2. Wheat, with clover;
3. Clover, cut early, second crop plowed in;
4. Wheat, with clover;
5. Clover, pastured, 2d crop plowed in;
6. Wheat;
7. Rye, with clover;
8. Corn, on clover sod.

The object was to introduce the wheat crop as often as the land would bear, which was three times in the eight years. Many will regard this as too exhausting, but it will be observed that each crop is preceded by a good manuring, either of barn manure and lime, or green clover. It is probable that in less efficient hands, or with imperfect manuring, the same successful result would not have attended; but in this case, the excellence of the system was proved by the produce of one season, which reached as high as 1400 bushels of wheat (from three fields;) 600 bushels of corn (from one field;) and 300 bushels of rye (from one field;) or at the rate of 37 bushels of wheat, 48 bushels of corn, and 24 bushels of rye, per acre. T.

OBSERVATIONS ON SHEEP.

Messrs. Editors.—During a short visit in Connecticut, the past month, I had the pleasure of examining the Merino flocks of Messrs. Blakeslee, Nettleton, Merriman, Hickox, and Matoon, of Watertown, and Messrs. Atwood and Smith, of Woodbury, Ct. I found all of these gentlemen in possession of sheep that embody many of the valuable qualities for the production of wool. But those qualities are combined in different proportions, each flock having their own peculiar traits of excellence; all of which show how much the character of a flock can be moulded to the taste of a skilful breeder.

Mr. Blakeslee's sheep are of fair size and shape, with a thick coating of wool of good length upon all parts of the body, and for fineness are perhaps unsurpassed by any pure Merino. It is Mr. Blakeslee's practice to shear his lambs in August, consequently the average weight of the fleeces of his flock is not as high as it would be if his yearlings had a year's growth of wool. Mr. Atwood's sheep are of good quality, and truly remarkable for constitution, form, and weight of the fleece. Mr. Nettleton's sheep are in several respects rather a medium between Messrs. Atwood and Blakeslee's. The owners of the other named flocks being absent, and some of their sheep in open fields, I did not so thoroughly examine them, but they appeared like good sheep, with characteristics similar to those already named. There is also a strong family resemblance among the members of each of those flocks, which is another index of a systematic course of breeding. Yet there is a perceptible difference between what might be termed the best, an average, and the poorest. The fact is, there are seldom any large flocks so good but what we may select individuals that are comparatively poor, and seldom any flocks so poor that they do not contain a few good sheep. To judge of the real character of a flock we want to see the whole flock, or if we see a few individuals only, we want to know their true comparative rank.

I had also the satisfaction of examining the importation of Mr. Taintor, of Hartford, Ct. Here we find size and form of carcass excelling anything I ever witnessed in the Merino race, and for constitution and weight of fleece they are of nearly a corresponding degree of merit. These sheep are another illustration of what may be brought about by a marked course of feeding and breeding. Were those sheep as fine as many other Merinos, they would be the most valuable stock in the country, and could the ewes be crossed with fine wooled rams, it would, in my opinion, add much to the value of the stock, as size is a point that may be attained without impairing other qualities, through the medium of the dam, and the outward coating and quality of the wool through the influence of the sire.

From a personal inspection of some of the most noted flocks, and the combined offspring of the same flocks of equal merit, I am satisfied that the progress of our best flocks is frequently retarded by "in-and-in breeding." I am the more strongly confirmed in this opinion, from the fact, that in the examination of sheep that have been bred in this manner for a series of years, it will generally be observed that the oldest sheep are the most valuable stock. These observations, with my own experience, have caused me to place much confidence in the utility of making frequent crosses with the blood of other families of the same breed, provided that the blood is superior, or equally as good as our own. It not unfrequently happens that the characteristics of two flocks equally valuable, are such that the imperfections of one would be counteracted by the perfections of the other, and by uniting the blood of the two, many of the offspring would surpass the parents on either side.

I find, by conversing with wool-growers in various sections of the country, that many of them are ever jealous of the purity of such flocks as are claimed to be of pure Spanish origin. Those having the finest wool are suspected to be of a Saxon mixture, and those having the heaviest fleeces, are suspected of being crossed with native. It is perhaps too frequently the case that there is some just cause for these insinuations; but the bare fact that some flocks produce very fine wool, and others very heavy fleeces, is no sure evidence that they are grade sheep; for all this can be brought about by management in feeding and breeding, and still preserve the purity of Spanish blood. I believe the pure Merino, in their most valuable state, have both fine and heavy fleeces, and the country now affords many scattering specimens, and occasionally flocks in which these qualities are combined to a high degree. The reason why such are not as numerous as those of a medium and ordinary character, is not because we are not abundantly supplied with the materials for making them so; but it is because the breeders of domestic animals do not sufficiently exercise their own faculties and means, to acquire that knowledge, skill, and energy which are requisite in order to operate with the best success upon those materials. No one can become a successful breeder without having a quick perception of those external marks and qualities which indicate the true worth of an animal, and are an indispensable guide for making judicious selections. Then with a thorough acquaintance with the principles of breeding, selection, and crossing, we can combine, modify, improve, and propagate those qualities, giving the progeny the most perfect and valuable organization; and if the thing is practicable, each succeeding issue will be an improvement upon the preceding.

The prominent objections to many of our flocks, are more the results of injudicious breeding than any natural defect in the original blood. There is no doubt in my mind, but that in the pure Spanish Merino, we have all of the natural elements for producing better sheep and more valuable fleeces than ever have been bred in this or any other country. All that is wanted is a more perfect and uniform development of all of the valuable qualities among the members of one flock; or in other words, a consolidation of those individual traits for which many flocks have already gained a merited reputation. This can only be accomplished by time and perseverance, in crossing and re-crossing the very best animals upon the most correct principles of breeding. I will venture to predict, that if wool-growers would thoroughly study the defects and merits of their sheep, and acquaint themselves with the best practical means of diminishing the one, preserving and improving the other, they might in a few years increase the value of a large proportion of their flocks one-third, without any additional expense in feeding. If any think this impracticable, I would refer them to the difference in the annual returns between ordinary and choice flocks of the same breed. While the cash value of the fleeces of many flocks the past season has averaged no more than seventy-five cents each, that of others has been a dollar and twenty-five cents, a dollar and fifty cents, and a dollar and seventy-five cents. The cash sales from one of my flocks of breeding ewes, one hundred in number, averaged a dollar and fifty-eight cents per fleece; from thirty-one breeding ewes, a dollar and ninety-six cents; from twenty-five yearling ewes, a dollar and fifty-six cents. The two last-named flocks, were sheep selected previous to shearing. The cash value of the fleeces of a hundred and forty-four yearlings, (May lambs,) was a dollar and forty-two cents each. Eben'r Bridge.

Pomfret, Windsor Co., Vt., March, 1847.

ON THE USE OF CHARCOAL AS A MANURE.

Messrs. Editors.—Permit me through the medium of your valuable paper, to answer the queries of your correspondent, Mr. John Moxon, of Monroe county, relative to charcoal as a manure for wheat; mode of pulverizing, &c., &c. I presume the article Mr. Moxon refers to, is the following, which I find page 197, in the Dec. number, 1843, instead of page 183, in the Cultivator of 1844.

"I, M. W. Powell, Surveyor, hereby certify, that I have measured the ground herein described, beginning at an apple tree, and running a northwest course ninety-five links, thence a southwest course fifty links, thence east thirty links to a line at the north angle, thence east seventy links to the place of beginning; the line from the base to the north angle being twenty-six links, containing two rods, which is a portion of R. L. Pell's wheat lot No. 2.

"We, Patrick Farrell and Leonard Latten, hereby certify that we gathered, threshed, cleaned, and measured the wheat grown on the above described two rods of ground, belonging to Robert L. Pell, Esq., of Pelham, Ulster Co., and the yield was 31 quarts and 1 pint, dry measure. We believe if the gleanings had been threshed, there would have been one bushel.

(Signed) Patrick Farrell,
Leonard Latten."

If this is the article Mr. Moxon alludes to, he wishes "particularly to know the nature of the soil where the charcoal was used, whether light or heavy, and whether it had been manured within four years previous?"

The surface soil is a sandy loam, with a small admixture of clay; the subsoil is composed of clay and sand, and is twelve feet deep. By analysis, this soil contained all the chemical ingredients necessary to grow any of the cerealia; and had not been manured, or cultivated, except with grass, for many years. By recent analyses of wheat, rye, oats, corn, buckwheat, &c., it appears that they all contain, not only in the stem, but kernel, the following eleven chemical substances, to wit: potash, soda, lime, magnesia, alumina, oxide of iron, oxide of manganese, silica, sulphuric acid, phosphoric acid, and chlorine. If one of these be entirely absent from a soil, the cerealia cannot grow in it, they all being essential to vegetable existence. Carbon is required likewise to develop the nutritive qualities of the plant. In wheat starch, 52.58 per cent. of carbon is found, and in oak wood the same; when oak wood is burned for the purpose of obtaining charcoal, it is not any part of the wood which forms the carbon by ignition, as is vulgarly supposed, but the carbonaceous substance taken up in its growth; by burning, the carbon being less combustible than the other elements, oxygen and hydrogen remains.

If you will take the trouble to examine a sound piece of charcoal an eighteenth of an inch in diameter, you will find one hundred and fifty pores; an inch in diameter would present over 5,700,000 pores, all of which are surrounded by carbon in its original position, as taken up by the tree in its growing state. Burn this carbon and the ashes will contain lime, silex, clay, and alkali; sometimes a minute particle of iron, so that when burned to ash, it is precisely the same thing as if you were to burn wood in the open air, but not as valuable by any means, inasmuch as its gaseous properties are at once given to the atmosphere, in the form of carbonic acid gas; this gas is the suffocating principle of charcoal which renders it so dangerous as fuel. I mention these facts to show you the effect it had upon my wheat. The soil had not in it sufficient carbon to supply 52.58 per cent.; by an application, therefore, of that simple substance, the other requisites being present, the wheat could not but grow. Its action is permanent; during dry weather it absorbs from the atmosphere 90 times its own volume of gas, which when rain falls, is released, and immediately elaborated by the leaves of the plant. The charcoal then becomes charged with water to the same amount which is yielded to the plant during drouth.

The lot on which I grew the wheat in question, was immediately seeded down with clover and timothy, consequently I have had no opportunity of experimenting further upon it. I have, however, tried numerous experiments with wheat, manuring with compounds, and highly nitrogenized manures, obtaining 64¾ lbs. to the bushel, and 18 per cent. of gluten, which is the all important principle. Wheat generally, throughout the United States, does not contain much more than 7 per cent. That is the reason why our flour will not make vermicelli and macaroni. The Italian flour yields from 10 to 12 per cent.; consequently the Italians make that substance in great perfection.

Second query. "I have got a pretty large pit of charcoal, and am puzzled how best to pulverize and apply it." I would advise that the pit should be shaken up, and coal exposed to the influence of the sun until dry; then draw it into the barn, and spread it about two inches thick upon the floor,—pass a granite or iron garden roller twice over it, and it will be sufficiently pulverized for agricultural purposes; spread it at the rate of one hundred bushels per acre on subsoiled land, after the wheat has been sown, and once harrowed, then harrow twice and roll once. If your land contains the requisite eleven, I will engage you seventy bushels of wheat per acre, and it shall weigh 64 lbs., provided you cut it in the milk. A portion of the same field, No. 2, cut in the milk, yielded wheat weighing 64¾ lbs. to the bushel, a few acres left standing until the grain was ripe, weighed but 52 lbs.

I am very respectfully, your ob't serv't,
Rob't L. Pell.

Pelham Farm, March 16, 1847.

Eds. Cultivator—In the March number of the Cultivator, page 91, Mr. Moxon, of Monroe county, inquires for information as to the use of charcoal for manure. I will give one trial that I made with it.

I prepared a piece of eight acres of turf ground by summer-fallowing, about the first of September. The ground being ready for sowing, I had 600 bushels of coal ground, intending to cover the whole; the hands, however, got it all on to about three-fourths of the lot. I found, also, about 30 bushels in a tinner's shanty, which he was cleaning out; (this was saturated with urine.) This added, made 105 bushels to the acre. It had no effect as manure. The following year, which was last summer, ground planted with corn; no perceptible effect whatever. The soil clay loam. SOLON RAMSDELL. *Elmira, N. Y., March*, 1845.

THE ORCHARD AND THE GARDEN.

MANAGEMENT OF PEAR TREES.—I find in the Cultivator for December, an account of the manner in which an "outcast" pear tree was renovated. The case I wish to present for your consideration is not exactly like this, for my trees are young and thrifty; but the fruit they bear, as described by J. B. W., is "only cracked, blighted, and miserable." Five years ago last November, I procured from an adjacent nursery, six Virgalieu pear trees, and set them in my garden. Believing that trees worth a dollar apiece were also worthy of the best attention, I did not fail to bestow it. Chip manure was repeatedly, and a small quantity of lime occasionally applied, and the ground about the trees kept mellow. The result of all was a rapid growth, one or two of them having already attained a height of sixteen feet, and at this ratio of increase, will soon become large trees. But unless they can be made to produce entirely different fruit from any yet gathered from them, they will be of little value. It has been suggested that so *rapid a growth* is unfavorable to bearing. There may be some truth in this remark. I have been informed that one or two trees of the same variety as mine, and taken from the same nursery, about the same time, but treated with comparative neglect, and of stinted growth, have borne excellent pears. I administered a pretty thorough pruning last spring, and a generous clipping of scions was also taken from them, with no apparent benefit. Thus, Mr. Editor, I have given you the facts in the case; and now I inquire whether the method pursued by J. B. W. to renovate an *old* tree, would, in your opinion, be likely to accomplish a similar result if applied to mine? G. BUTLER. *Clinton, Jan. 1st*, 1847.

REMARKS.—It is impossible to prescribe with precision in such cases as this, without knowing all the essential circumstances. Whether the difficulty is owing to a too rapid growth, to the exhaustion of some essential ingredient in the soil, as is suggested in the case given by J. B. W., or to something else unknown, or to several causes combined, it would be impossible to decide.

The experiment tried by J. B. W., is a very interesting and striking one. The trees were thrifty, and for a time bore well—they subsequently produced only worthless fruit. On the supposition that they had exhausted some essential portion of the soil, the trench was made round them, and new soil applied, with cinders, charcoal, and potash, accompanied by pruning. But a single case like this, though very interesting, is insufficient to establish a rule. Trees which continue growing, are constantly extending their roots into new portions of soil; hence a difficulty in this supposition. The beneficial effect of the newly applied soil and other ingredients, can however scarcely be questioned. The *root pruning*, given in digging the trench, may have had its influence; especially as the tree bore good fruit when younger, and pruning the tops and thus increasing the vigor of the branches, in connexion with the pruning of the roots, doubtless induced a growth very similar to that of the younger tree. Instances are not rare, where good pruning of old and apparently worthless trees, has thrown into them new vigor and productiveness. One part of the operation mentioned by J. B. W., was that of rubbing the tree with soft soap; now, a very successful cultivator informs the writer, that when his pear trees become stunted, a fine thrifty growth is invariably induced by only washing with soft soap, and without any additional treatment. These different influences are merely mentioned, to show in how many different ways this tree may be operated on, without at all meaning to assert that they all operated in the case mentioned.

With the trees mentioned by our correspondent, too rapid growth in connexion with some other unknown cause, may be the source of the difficulty. If he should try the experiment of lessening their luxuriance by root pruning, on one of his trees, and suffer the grass to grow about another, for the same object, he might perhaps determine this point. The treatment of J. B. W., may also be tried on others. To point out any remedy with greater precision than this, would perhaps be impossible, without knowing more of the real cause of the difficulty in question. T.

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INSECT ON GOOSEBERRY AND CURRANT BUSHES.—I have in my garden a large number of gooseberry bushes, most of which are of the finest varieties I could procure. I have picked from them as many as ten bushels of fruit in a season; and whilst most of my neighbors are troubled with mildew, I have never seen any in my garden. Yet I have suffered from another cause.

About three years since, there appeared a small worm on the bushes, in one corner of the garden, which eat off the leaves and left the fruit. The destruction of the leaf stopped the growth of the fruit, and destroyed it. The worms have increased until the last season they had spread over the whole garden, and when the gooseberry-leaves were gone, they attacked the currants, and trimmed them also. The worm or caterpillar, is, when full grown, about one inch in length, its color yellow, with black spots. After they have done their work, they go into the ground; after which the garden is filled with millers, which deposit their eggs on the bushes, to hatch out the next season.

I have given this description, hoping that you or some of your numerous correspondents may know of a remedy. I have tried every thing that has been suggested that I have seen, viz., lime, sifted on the bushes, and also mixed with the earth under the bush. I have tried nitre dissolved, and sprinkled on with a watering pot, snuff, and various other articles. A SUBSCRIBER. *Utica, March* 5, 1847.

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PRESERVING SCIONS.—I have tried at different times several plans for preserving scions from the time of cutting them in February and March, till the time of using them in April and May, and have never succeeded in any other way so well as by packing them in damp saw-dust. They are then easily overhauled if necessary, are entirely clean, the labels are neither covered with dirt or the marks obliterated; they will not become mouldy, are thus kept colder, and consequently may be kept much longer in good condition with the same care, than when packed in earth.

I have kept them thus from February to August, and from July to November, and I doubt not they might have been kept much longer. I packed them in a box, left them in a shady place in the open air.

I am of the opinion that saw-dust is also the best article to pack about the roots of trees that are to be sent a great distance, or kept out of the ground a long time. T. G. Yeomans. *Walworth, Feb.* 17, 1847.

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Raised Foot-paths.—Paths through the yard, near dwellings in the country, may be rendered much more convenient, and be much more easily kept in order, by raising an embankment from one to two feet in height. Two years ago, we dug a well, and had a quantity of the broken slate arranged for this purpose. It proved to be a labor-saving operation. Even when deep snows fall, very little (comparatively) settles on this ridge; and it is but a small job to keep the path open, while all the rest of the year, it may be safely traversed with slippers or thin shoes without wetting our feet, as the rain soaks away from the surface almost as soon as it falls. It is never slippery like plank or boards.—D. T. 3 *mo.* 20, 1847.

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"Peculiar growth of varieties."—As characteristics to distinguish one variety from another, I apprehend that too much importance has been attached to minute descriptions of the growth of the tree, and the appearance of the buds and leaves. Such marks have led some pomologists into great mistakes. A few years ago, a kind friend sent me scions of what he intended for the "*Early Red Margaret;*" and when the grafts grew, I observed that they greatly resemled in their downy leaves and slender twigs some that I had obtained from the late Robert Manning; but when the former came into bearing, it proved to be a *winter* apple! almost *white!* and not worth the trouble of gathering! I see one at this very moment from my window, hanging on the tree. Now had my obliging correspondent paid less attention to what he considered the PECULIARITY *of leaf*, and more to the PECULIARITY *of fruit*, he would have been saved from a blunder, and I from the toil of heading-down and grafting the tree anew.—D. Thomas. *Greatfield, 3d mo.* 31, 1847.

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Planting Orchards.—Apple trees should be planted about 30 feet distant from each other; pears and cherries, 20 feet; plums, peaches, nectarines, apricots, and almonds, 12 feet. The large intervening space between the rows of apple and pear trees, may be filled up with rows of pears on quince, at 8 or 10 feet apart, or with peaches, plums, &c., and thus all portions of the land will be productive of fruit crops during the period the apples and the pears on the pear stock, are attaining their full development. Quinces should be planted about 8 to 10 feet apart, and as they flourish most in a damp soil, they may be planted in locations that are too moist for most other fruits. The grape delights in a deep friable soil, and although usually found growing in a wild state in moist locations, it accommodates itself to all soils that will admit of its roots penetrating deep and wide, to abstract the requisite nourishment, and there is perhaps no other plant that is susceptible of such universal adaptation to climate and soil by proper management. Wm. R. Prince. *Flushing, L. I., April*, 1847.

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Transplanting Trees.—For the northern section of the country, the fore part of May is not too late for transplanting trees; at least it will do to transplant them till their leaves have considerably expanded.

Forest trees, designed for ornamental grounds and for shade, should be grown from seed in nurseries, or open grounds: but where these have not been provided, trees from the woods may answer as a substitute. If the forest is resorted to, it should be the object to obtain trees which have been as much as possible exposed to the air or light, and which have good tops, well balanced and regular. Trees of this description will be found to have the best roots, and are most likely to live and thrive. Those which have long slender trunks with but few branches, especially if the branches are chiefly on one side, should not be taken.

In setting out trees, care should be observed that they are not set too deeply in the ground. They do not require to be placed any deeper than they formerly stood. For forest trees, particularly the maple, elm and ash, covering the roots with muck, or the decayed leaves and turf from the woods, will be found very useful in giving the trees a start.

For *evergreens*, it is contended by some who have had considerable experience in the business, that it is best to transplant them quite late in spring, or the first of summer. J. Stetson states, in the *Massachusetts Plowman*, that he has succeeded in transplanting evergreens any time from April to June, if taken from a nursery, because they there form so compact a body of roots, that there is no danger with ordinary care, of shaking the earth from them. He has had the best success in planting in June. He planted 150 white pines, on the 22d of June, 1826, and the whole lot with the exception of three, lived. These three had the earth beaten off their roots in being moved, and, as was to have been expected, died.

In some trials which were made in this vicinity last year, almost equal success attended the planting.

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Black Knots on Plums.—Whatever be the cause of this disaster, there need be no difference or difficulty with regard to its prevention. Excision and burning of the affected branches has proved completely effectual where promptly and unremittingly applied. Some, indeed, have complained of failure; but in these cases the disease appears to have made great progress before the remedy was applied; or else the operation was not closely followed up on every successive appearance of the excresences.

Some readers will remember to have seen notices of the efficacy of washing the branches in strong brine. Some instances have lately occurred where the application of soft soap has given a similar result; and an acquaintance has very successfully applied a mixture of soft soap and salt. The excresences, if recent, soon wither and disappear. It may happen however, that some parts of the trees or remote branches may be inaccessible, and that excision may prove the easier of the two. T.

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Wash for Fruit Trees.—Lime wash, or whitewash, is not considered as good for trees as potash-wash. The latter is made by dissolving potash in water, at the rate of one pound to a gallon. It may be applied with a brush, in the spring, or at any other season, and will, by one or two applications, render the bark smooth and clean. For old trunks, with thick and rigid bark, Mr. Downing, (in the *Fruit and Fruit Trees of America,*) recommends a wash of soft soap. He thinks it better for this purpose than potash, "as a portion of it remains on the surface of the bark for some time, and with the action of every rain is dissolved and penetrates into every crevice, destroying the insects and softening the bark itself."

Invigorating Fruit Trees.—The papers often contain notices of the advantages of applying ashes, salt, cinders, charcoal, lime, soot, &c., to fruit trees, to increase their growth; these are often beneficial in moderate quantities, and occasionally eminently so in certain conditions of the tree or soil; but the treatment which is most strikingly beneficial, and in the greatest number of cases, is to make the soil deep and rich, and to keep it clean and mellow by constant cultivation. Hence the selection of stony ground or side-hills is bad policy.

Public Pleasure Grounds.—The Tennessee Farmer states that measures are in progress for purchasing a piece of ground at Nashville for a garden for horticultural improvement and ornamental pleasure grounds. This is well worthy the imitation of other cities. T.

AGRICULTURAL SOCIETIES.

LIST OF PREMIUMS FOR 1847,

OF THE

NEW-YORK STATE AGRICULTURAL SOCIETY.

(*Concluded from page* 118.)

SUGAR.

Best 25 lbs. maple sugar,	$10
2d best,	5
3d best,	Col. Tour.
4th best,	Vol. Trans.

SILK.

Best specimen manufactured, (woven into cloth or ribbons,)	$15
2d best,	10
3d best,	Col. Tour.
4th best,	Vol. Trans.
Best specimen not less than one pound reeled silk,	$5
2d best,	Col. Tour.
3d best,	Vol. Trans.
Best specimen of sewing silk, not less than 1 lb, of domestic growth,	$10
2d best,	5
3d best,	Col. Tour.
4th best,	Vol. Trans.
Best one-half bushel cocoons, 1847,	$8
2d best,	Col. Tour.
3d best	Vol. Trans.

DOMESTIC MANUFACTURES.

Best woolen blankets, $5—2d, $4—3d, $3.
Best ten yards flannel, $5—2d, $4—3d, $3.
Best ten yards woolen cloth, $5—2d, $4—3d, $3.
Best woolen carpet, $5—2d, $4—3d, $3.
Best tow cloth, 15 yards, $5—2d, Vol. Trans.
Best ten yards linen, $5—2d, $4, 3d, $3.
Best ten yards linen diaper, $5—2d, $4—3d, $3.
Best hearth rug, $5—2d, $4—3d, $3—4th, $2—5th, Volume Transactions.
Best ten yards kersey, $3—2d, $2—3d, Trans.
Best rag carpet, 15 yards, $3—2d, $2—3d, Trans.
Best double carpet coverlet, $4—2d $3—3d. $2—4th, Trans.
Best pair woolen knit stockings, $2—2d, Trans.
Best wove woolen stockings, $2—2d, Trans.
Best cotton wove stockings, $2—2d, Trans.
Best pound of linen sewing thread, $2—2d, Trans.
Best linen wove stockings, $2—2d, Trans.
Best linen knit stockings, $2—2d. Trans.
Best knit cotton stockings, $2—2d, Trans.

Discretionary Premiums will be awarded for other articles deem-worthy by the committee.

NEEDLE, SHELL, AND WAX WORK.

Best ornamental needle work,	$1	and Diploma.
" ottoman covers,	"	"
" table covers,	"	"
" group flowers,	"	"
" variety of worsted work,	"	"
" fancy chair work with needle,	"	"
" worked cushion and back,	"	"
" worked collar and handkerchief,	"	"
" woolen shawl,	"	"
" worked quilts,	"	"
" white quilts,	"	"
" silk patch-work quilt,	"	"
" fringe mittens,	"	"
" port-folio, worked,	"	"
" bonnets, silk,	"	"
" " straw,	"	"
" lace capes,	"	"
" lamp stand mat,	"	"
" ornamental shell work	$3	and Diploma.
" specimen of wax flowers,	2	"

Discretionary Premiums to be awarded for other articles which are deemed entitled to commendation.

FLOWERS.

PROFESSIONAL LIST.

Greatest variety and quantity of flowers,	$5
Dahlias.	
Greatest variety	$5
Best 24 dissimilar blooms,	3
Roses.	
Greatest variety	5
Best 24 dissimilar blooms,	3
Phloxes.	
Best 12 varieties,	3
Best seedling	2
Verbenas.	
Greatest variety and number,	3
Best 12 varieties,	2
Best seedling,	2
German Asters.	
Best collection,	3
Pansies.	
Best and greatest variety,	3
Best 24 varieties,	2

AMATEUR LIST.

Greatest variety and quantity of flowers,	Silver Medal.
Dahlias.	
Greatest variety	Silver Medal.
Best 12 dissimilar blooms,	Horticulturist.
Roses.	
Greatest variety,	Silver Medal.
Best 12 dissimilar blooms,	Horticulturist.
Phloxes.	
Best 6 varieties,	Horticulturist.
Best seedling,	do.
Verbenas.	
Greatest variety,	Hort.
Best 12 varieties,	do.
Best seedling,	do.
German Asters.	
Best collection,	Hort.
Pansies.	
Best and greatest variety,	Horticulturist
Best 12 varieties,	Hort.

GENERAL LIST.

OPEN TO ALL COMPETITORS.

Best collection Green House Plants owned by one person,	Silver Medal.
Best Floral Design,	do.
Best Floral ornament,	do.
2d do.	Col'ns Tour.
3d do.	Washington's Letters.
Best hand Bouquet, "flat"	Horticulturist.
2d do. do.	Washington's Letters.
3d do. do.	Transactions.
Best hand Bouquet. "round,"	Horticulturist,
2d do. do.	Washington's Letters.
3d do. do.	Transactions.

VEGETABLES.

24 best stalks, celery,	$1
6 best heads cauliflower,	1
6 best heads broccoli,	1
12 best white table turneps,	1
12 best carrots,	1
12 best table beets,	1
12 best parsneps,	1
12 best onions,	1
3 best heads of cabbage,	1
12 best tomatoes,	1
2 best purple egg plants,	1
12 best sweet potatoes,	1
Best half peck Lima beans,	1
Best half peck Windsor beans,	1
Best bunch double parsley,	1
Three best squashes,	1
Largest pumpkin,	1
12 best ears seed corn,	1
Best half peck table potatoes,	1
Second best,	1
Best seedling potato,	1

Discretionary Premiums will be awarded on choice garden products not above enumerated.

MISCELLANEOUS.

Best Iron Gate for farm purposes,	Silver Medal.
Best ornamental cast-iron vase, on pedestal,	do.
Best sample drain tile,	do.
Best quarter of an acre of osier willow, and the best specimens manufactured from the product,	$5
Best specimen wire hurdle fence, to be accompanied with an account of cost,	Silver Medal.

PAINTINGS AND DRAWINGS.

Best specimen,	$10 and Dip.
Best specimen of animal portraits,	10 and Dip.
Best drawing of show grounds and buildings,	Diploma.

STOVES.

Possessing some new and valuable improvements.

Best cooking stove for wood fire,	Diploma.
Second best,	Silver Medal.
Best cooking stove for coal fire,	Diploma.
Second best,	Silver Medal.
Best parlor stove,	Diploma.
Second best,	Silver Medal.

For improvements and machinery useful to the farmer and having valuable properties, premiums will be awarded.

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PREMIUMS ON FRUIT.

APPLES.

For the greatest and best variety of good table apples, 3 of each variety; named and labeled, grown by exhibitor, Downing's Fruits and Fruit Trees of America. Colored plates.
For the 2d best, ... $5 and Downing's common edition.
3d best, ... Vol. Trans.
The best 12 varieties of table apples, labelled, $5 and Downing's common edition.
2d best do., ... $2 and do.
The best 6 winter varieties do., labelled, ... 3 and do.
2d best do., ... 1 and Trans.

PEARS.

For the greatest number of varieties of good pears, named and labelled .... Downing's book, colored plates.
2d greatest, do., ... $5 and Downing's com. edition.
3d do. .... Vol. Trans.
For the best select collection of first rate autumn pears, named and labelled, ... $5 and Downing's com. edition.
2d best .... 2 and do.
For the largest and best collection of winter pears, named and labelled .... $3 and Downing's com. edition.
2d best do. .... Downing's com. edition.

Best collection of newly introduced pears, with a description, &c., as provided for new variety of seedling apples, Downing's colored plates.

PEACHES.

Best 12 varieties, labelled,....... $5 and Downing's com. edition.
2d do.,.......................... 2 and do.
Best 6 varieties, labelled,........ 3 and do.
2d do.,.......................... 1 and do.
Best 12 peaches,.................. 2 and do.
2d do ,.......................... Downing's do.
Best seedling variety, 6 specimens, 3 and do.
2d do.,.......................... 2 and do.

PLUMS.

Best collection of plums, 6 specimens each variety, $5 and Downing's com. edition.
2d do............................. $5 and Downing's com. edition.
Best 6 varieties of good plums, 6 specimens each, $3 and Thomas' Fruit Culturist.
2d do.................................. $1 and Thomas' Fruit Cult.
Best 12 plums choice variety,... .... 1 and do.
2d do.,................................ Thomas' Fruit Cult.
Best seedling plums, with descriptions, as in apples, $5 and Downing's com. edition.
2d best,.......................... $2 and Downing's com. edition.

NECTARINES AND APRICOTS.

Best and greatest number of good varieties, 6 specimens each, labelled ,......................... $3 and Downing's com. edition.
2d do.,......................... 2 and Thomas' Fruit. Cult.
Best 12 specimens of any good variety,.. $1 and Down. com. ed.
3d do.,.................................. 1 and Thomas' Fr. Cul.

QUINCES.

Best 12 quinces of any variety,.. $3 and Downing's com. edition.
2d do.,........................... 1 and Thomas' Fruit Cult.
3d do.,........................... Thomas' Fruit Cult.

GRAPES.

Best and most extensive collection of good native grapes, grown in open air,....................... $5 and Down. com. edition.
2d do.,...... .... 2 and do.
Best 3 varieties of native or foreign grapes, grown under glass, 3 bunches each to be shown,........ $5 and Down. com. edition.
2d do............................... 2 and do.
Best dish of native grapes............ Thomas' Fruit Cult.

WATERMELONS.

Best 6 six specimens of any variety, $3 and Bridgman's Gardener's Assistant.
2d do.,...................................... $1 and Bridgman.

MUSKMELONS.

Best 6 specimens of any variety, ... $3 and Bridgman.
2d do.,...................................... 1 and do.

CRANBERRIES.

Best peck of domestic culture, ... $5
2d do ,................. .... $2

To be accompanied with a full description of the manner of cultivation, nature of soil, &c.

Any premiums may be withheld in the discretion of the committee, if the samples exhibited are not worthy of a premium.

The fruit exhibited and for which premiums are awarded, to be at the disposal of the committee.

Six vols. of Downing, common edition, and twelve of Thomas' Fruit Cult., will be awarded by the committee, in their discretion, for choice fruits not enumerated.

WINTER MEETING.

For the best new seedling variety of winter apples, of decidedly superior quality and valuable for exportation; one dozen specimens to be exhibited: together with a history of its origin; a description of the growth, character and habits of the tree, and the growing of the fruit—such fruit to be adjudged by the committee as of the first character for orchard purposes, Downing's book, colored plates.
For the 2d best do., ... $5 and Down. com. edition.

The above new seedling variety to be sent to B. P. JOHNSON, Secretary, Agricultural Rooms, Albany, before the 15th January, 1848, for examination.

For the best new fall seedling apple for all purposes, conditions and descriptions as above, ... $5 and Down com. edition.
2d best do........................... 2 and do.

These last named to be exhibited at the Annual Fair and Show of the Society, in 1848.

Resolved, That a committee of —— be appointed by the Executive Committee, who shall report at the next annual meeting a list of not exceeding 30 kinds of apples, which shall be in their opinion best adapted to the economical demands of the people of this state, and to be best suited to the different localities of the same, comprising their most extensive use in all seasons, for home consumption, and for exportation, the individual names of said fruits, a drawing of each separate kind, with a particular description thereof; and that in this connection they also take into consideration the several classes of fine fruits as adapted to the above purposes, and —— dollars be appropriated as in the judgment of the Executive Committee shall be necessary to accomplish this object.

Committee.—Lewis F. Allen, Black Rock; A. J. Downing, Newburgh; Hon. Samuel Young, Bailston; Dr. H. Wendell, Albany; and J. W. Bissell, Rochester.

DISCRETIONARY PREMIUMS,

Will be awarded for articles of merit exhibited by *mechanics*, in all the various branches—and it is hoped that a general exhibition will be made.

Plate will be substituted for money premiums in all cases, at the option of competitor

FIELD CROPS.—AT WINTER MEETING.

Best crop of wheat raised upon any farm, not less than two acres to be harvested, threshed and measured, ... $15
2d best,.................. $10 | 3d do.,............ Vol. Trans.
Best crop of spring wheat, not less than two acres, to be harvested, &c.,.. $10
2d do.,.................. $8 | 3d do.,............ Vol. Trans.
Best crop of Indian corn, not less than 2 acres, to be gathered, shelled, and weighed, between the 20th December and 5th January, ... $30
2d do.,.... .... $15 | 3d do.,........................ $[illegible]
Best crop of barley, not less than 2 acres, to be harvested, &c.. $10
2d do.,.................. $8 | 3d do.,............ Vol. Trans.
Best crop of rye, 2 acres,.. $8
2d do.,.................. $5 | Third do.,.......... Vol. Trans.
Best crop of oats, 2 acres, &c................................. $10
2d do.,.................. $8 | 3d do., ... Trans.
Best crop of potatoes, not less than one acre, to be dug and measured, of a good table quality,........................... $10
2d do.,..................$8 | 3d do., ... Trans.
Best crop of potatoes, as to quantity, not less than 1 acre, ... $10
2d do ,..................$8 | 3d do.,................ Trans.
Best crop of ruta baga, not less than one acre, to be weighed, and 50 lbs. estimated as a bushel,............................ $10
2d do.,.................. $8 | 3d do., ... Trans.
Best crop of sugar beets, not less than one-half an acre, weight as above,... .... $8
2d do.,............ ...... $5 | 3d do., ... Trans.
Best crop carrots, ½ an acre, ... $8
2d do.,.... .... $5 | 3d do.,...................Trans.
Best crop mangel wurtzel, ½ an acre,............................ $8
2d do.,..................$5 | 3d do., ... Trans.
Best crop of peas, 1 acre, ... $8
2d do ,..................$5 | 3d do.,...................Trans.
Best crop of beans, not less than 1 acre,........................ $8
2d do.,..................$5 | 3d do.,...................Trans.
Best acre of corn fodder, with a particular account of manner of cultivation and securing the crop, ...$10
Best half acre of hops, with a full account of method of cultivating and preparing crop for market..............................$10
Best half-acre of flax, with like statements as above, ... 5
Best half acre of tobacco, do. do. 5
Best acre of broom corn, do. do. 5
Best acre of clover seed, do. do. 5
Best acre of timothy seed, do. do. 5

EXPERIMENTS.

Whereas, The Agricultural Society of the State of New-York, has not an experimental farm; and whereas, to some extent, satisfactory experiments can be made by intelligent farmers on their own farms, therefore

Resolved, That the undermentioned list of premiums be offered to induce public spirited individuals to lend their valuable aid in extending the boundaries of accurate rural knowledge.

Three premiums will be awarded of $30, $20, and 10, in January, 1848, for the best experiment upon a herd of not less than 8 cows, to determine the relative advantages of soiling, or depasturing milch cows. The experiment to be conducted as follows:—

1st. The experiment must commence on the first day of May, and be continued until the first day of November.

2. The cows to be divided in two lots of four each. One lot to be soiled, the other depastured. Before commencing the experiment, each lot must be weighed, and the record of the weight returned to the committee. It is necessary that the two lots shall be as near alike in weight and milking properties as possible.

3d. The milk of each lot to be weighed separate daily.

4th. The manure made from those soiled to be ascertained in cords.

5th. An account to be kept of the expense of soiling, also detailed statements of the entire management, together with the measurement of the land occupied in soiling, and each to be returned to the committee.

6th. A description and measurement of the land occupied for pasture, also to be made.

7th Each lot to be weighed at the conclusion of the experiment.

For the best experiment to be continued through three crops, to ascertain in bushels of grain and weight of stalks or straw, the actual value of manure to a farmer. The experiments to be conducted as follows, viz:—

1. Three contiguous acres of ground shall be selected.

2. One acre of which shall be manured with not more than ten cords of common barn yard manure the first year, and plowed under. The second acre to be manured with fermented or composted manure, to be applied in any manner the experimenter chooses; but a full account of the mode of making the compost, and the manner of its application, accompanied with a statement of the cost of making and application, will be required.

3. The three acres are to be planted with corn the first year; the second to be sowed with barley or oats; the third crop to be winter grain; an accurate account of the yield of each crop to be kept.

4. A full account of the whole management and all the details respecting the culture and the circumstances affecting the crop

5 The several kinds of soil to be particularly described, and specimens transmitted to the State Society for analysis before commencing the experiment—and also at the conclusion of the experiment—discriminating carefully between each acre.

For the best..... $40 | 2d best......... $30 | 3d best....... . $20

N. B. The specimens of soil to be selected for analysis, must be taken from the surface, in different parts of the acre. Where the acre is green sward, the sample must be taken just at the termination of the roots of the grass. Specimens should also be selected from the depth of seven or eight inches. At all events, immelately below the usual depth which the plow runs. The specimens of soil must in no case be mixed; and should consist of about 1 pound sewed in a cotton bag.

$20 will be paid at the annual meeting of the society in 1848, to the person who will make the most satisfactory agricultural experiment, accuracy and the importance of the experiment to be taken into consideration. A full detail of the experiment and its results must accompany the application.

For the best managed entire flock of sheep of not less than 100, to be awarded at the annual meeting in 1848.

Best, ... $30 | 2d best, ... 20 | 3d best $10

The applicants for these premiums will be required to furnish the Society with the following information, viz:—

1. The kind and quantity of food, and its value.
2. The quantity and quality of wool—this to be determined by its being submitted to the stapling of some respectable manufacturing establishment, whose certificate shall accompany the application for the premium.
3. The number of the increase.
4. Kind of sheep, and the number of ewes, wethers and bucks
5. The value of sheep when fattened, and the value of lambs for the butcher.

Competition from persons not residents of the State.

Premiums of Plate, Medals, and Diplomas, will be awarded on—

The best bull of any breed, 3 years old.
" " 2 "
On the best cow, 3 years old.
" heifer, 2 "
" " 1 year old.
" yoke of working oxen.
" pair fat cattle.
" stallion.
" brood mare.
" pair matched horses.
" buck, long or middle wooled.
" " fine wool.
" pen of Merino and Saxony ewes, not less than 5 each.

B. P. Johnson, Sec'y.

Any information desired by persons who intend to compete for premiums, will be furnished by the Secretary, on application, and he solicits free and full inquiries from all who are desirous of competing at the Fair, or of presenting articles for exhibition.

NEW-YORK STATE AGRICULTURAL SOCIETY.

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Meeting of the Executive Committee at the Society's Hall, April 8—George Vail, President; Wm. Buel, C. N. Bement, Vice-Presidents; Ambrose Stevens, Executive Committee; J. McD. McIntyre, Treasurer; B. P. Johnson, Recording Secretary.

Letters were read from Prof. Gardiner, Geo. Geddes, J. Delafield, Harper and Brothers, Asa Fitch, M. D., A. J. Downing, Hon. Z. Pratt, S. L. Randall, W. W. McCay, T. Whiting, J. M'Donald, Dr. R Wheeler, J. M'Dederer, A. G. Carll, A. Redfield, A. M Paine, H. Mesier, Hon. E. Cost, J. Wilkinson, M. D. Blauvelt, S. W. Jewett, Dr. A Doubleday, Jacob Morris, C. Hawley, H. L. Day, A. B. Allen, and O. Phelps.

J. Delafield, Esq., President of the Seneca Co. Ag. Society, furnished an interesting account of the organization of Town Associations and Farmers Clubs in Seneca county. He says: "I have had the pleasure to address several meetings of from 40 to 60 farmers, assembled in the town of Fayette, and to witness an interest well worthy of the high pursuits in which they are engaged." "I am happy to add, these meetings are looked forward to by our *Young Men*, as objects of pleasure and profit."

Mathias P. Coons, of Lansingburgh, Rensselaer county, exhibited a model fence, with cast-iron posts, called "Coons' cast-iron post farm and ornamental fence." The advantages claimed for the fence are:

1st. The durability of the cast-iron posts.

2d. The cheapness and ease with which a fence may be constructed—cheaper than an ordinary post and board fence.

3d. It may be placed permanently on all soils, or, if necessary, used as a hurdle fence, and can be put up as fast as the bottom rails can be laid for an ordinary fence.

4th. The posts are such that they are sufficient for any ordinary purpose, weighing from eight to ten pounds.

The Board were of the opinion that the improvement of Mr. Coons is a valuable one, and deserving of encouragement. [A specimen of the fence may be seen at the Agricultural Rooms.]

Howard Delano, of Mottville, Onondaga county, presented to the Society a premium diamond plow, of most superior finish. Thanks of Board tendered Mr. Delano. [Plow may be seen at Agricultural Rooms. Farmers are invited to examine this beautiful specimen of work.]

Mr. Stevens presented to the Society, on behalf of the editor of the American Agriculturist, the vols. of that paper for 1844, '45, and '46. Thanks to the donor.

C. N. Bement presented a copy of American Poulterer's Companion. Thanks to the donor.

On motion of Mr. Stevens, the following preamble and resolution were adopted:—

Whereas it is important to the best interests of the Society in its endeavors to advance the agricultural interest of the State, that its library should be furnished with all the important works on agriculture, especially those relating to the agriculture of this country:

Resolved, That the members of the Society and others interested in its prosperity, be invited to aid in furnishing agricultural works for the library, by donation or otherwise, as they shall judge best.

AGRICULTURAL SURVEY.

On motion of Mr. Johnson,

Resolved, That the sum of $—— be appropriated for the purpose of obtaining, during the present year, the survey of one or more counties, and that the plan submitted by the Secretary be adopted as the basis of such surveys.

Resolved, That the Secretary be directed to open a correspondence with gentlemen in different counties, in relation to such survey, and report at the next meeting the results of his correspondence, and the terms on which an accurate survey of any county can be obtained.

ADDITIONAL PREMIUMS—ON FOREIGN STOCK.

For the best Stallion of any breed,................	$15
For the 2d best " "	10
For the 3d best " "	Youatt.
For the best Brood Mare,........................	$15
For the 2d best "	10
For the 3d best "	Youatt.

ON POTATOES.

For the best and greatest variety of Seedling Potatoes of approved varieties, $10.

The Secretary stated that 47 counties had reported, *being all*, as he was informed, that were organized in the State.

On motion of Mr. Stevens, a committee, consisting of Messrs. Johnson, Tucker, McIntyre and Stevens, were appointed to report at the next meeting a plan for the gradual increase of the library, and a list of such works as are now needed as books of reference.

B. P. Johnson, *Secretary.*

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Agricultural Rooms, Albany, April 8, 1847.

The Executive Committee have the satisfaction to announce to the Agriculturists of the State of New York, that our distinguished fellow-citizen, the Hon. Silas Wright, has accepted an invitation to deliver the annual address at the Fair of the State Ag. Society at Saratoga, on the 16th of September next.

It will doubtless have been perceived from the published proceedings of the Executive Committee, that they have, in accordance with the recommendation expressed by the Society at the annual meeting in January, located the Fair at Saratoga Springs, where it will be held on the 14th, 15th and 16th of September, 1847.

A delegation of the committee visited Saratoga, and selected a fine elevated plat of ground, within a quarter of a mile of Congress spring, containing an area of fifteen acres or more, which will be enclosed. Spacious buildings will be erected within the enclosure, with ample accommodations for all articles presented for exhibition.

Care will also be taken, that arrangements on an extensive scale appropriate to the occasion, be made for the reception and exhibition of every description of stock, farm implements, articles of domestic manufacture, fruits, flowers, and articles of mechanic skill, &c.

Arrangements will be made with the several Railroad Companies for the gratuitous transportation of stock as well as other articles designed for exhibition, so as to arrive a day or two previous to the first day of exhibition.

The two railroads leading to Saratoga will be in readiness to transport without hindrance or delay the visitors who may desire to be present on the occasion. Geo. Vail, *President.*

B. P. Johnson, *Secretary.*

NEW-YORK COUNTY AG. SOCIETIES.

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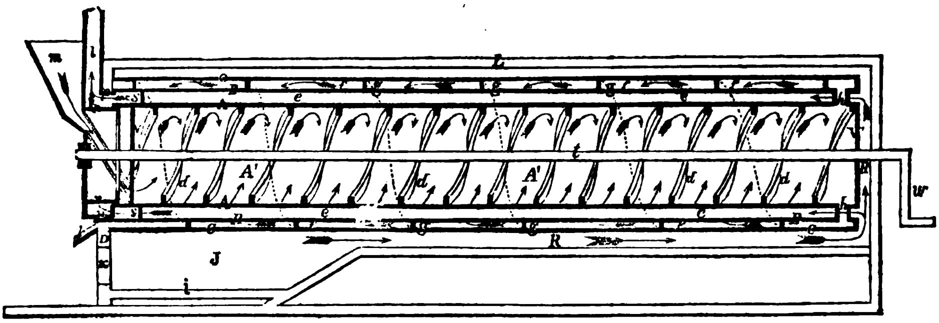
RENSSELAER.—This Society will hold its exhibition at Troy, Wednesday and Thursday, September 22d and 23d. They have offered a handsome list of premiums, and we presume, from the well-known character of the previous exhibitions of this Society, that the next show will be large and attractive.

CAYUGA.—The next exhibition of this Society will take place at Auburn on the 6th and 7th days of October. A handsome sum is offered in premiums, embracing all departments of agriculture and horticulture, as well as farm implements and domestic manufactures in general—all well calculated to excite emulation, and bring out a full exhibition. We tender the Society our thanks for their offer of several volumes of the Cultivator, as premiums.

CALEDONIA, *Vermont.*—Show to be held at St. Johnsbury, Oct. 7th. The premium list shows that the interest of agriculture is well sustained by this Society. A rule is adopted by which every one who pays a dollar to the Treasurer of the Society, is entitled to a volume of the Cultivator.

Root Crops.—William Garbutt, of Wheatland, N. Y., who raises from three to five acres of roots per annum, besides potatoes, is convinced from long experience, that cooked potatoes are the cheapest food for feeding swine; that ruta-bagas and field beets are most valuable for neat stock, and especially to grain growers who have an abundance of straw; that carrots are most profitable as extra feed for horses in winter; and that the large sugar beet and mangel wurtzel are the most valuable succulent food for milch cows in winter. T.



HOWARD'S ROTARY CYLINDRICAL GRAIN DRYER.

Editors Cultivator—In the last number of the Cultivator, you request some one to furnish you a description of the process of kiln-drying grain, especially Indian corn, with the expense, &c. Agreeably to your request, I have procured, and enclose to you, a copy of Mr. Sebre Howard's patent for a "Rotary Cylindrical Grain Dryer." A great number of these dryers have been put up in different parts of the country, and give the most perfect satisfaction. I have been informed that the expense of kiln-drying corn in one of Mr. Howard's dryers, is not over one fourth of a cent per bushel; and that an apparatus capable of kiln-drying sixteen hundred bushels per day will not cost over five hundred dollars. The operation of the machine is clearly set forth in the specification. Respectfully yours,

Z. C. Robbins, Attorney for Patents.
Washington, D. C., March 23, 1847.

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To all whom it may concern; be it known, that I, Sebre Howard, of Adrian, in the county of Lenawee, and state of Michigan, have invented a new and improved Kiln-Drying apparatus, which I denominate Howard's Rotary Cylindrical Grain-Dryer; and I do hereby declare the following to be a full and accurate description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification. My Rotary Cylindrical Grain Dryer is composed of three metalic cylindrical casings, of different sizes, combined concentrically, the one within another, forming annular spaces between the central and the interior and exterior casings. The concentric combined casings are placed within a heating chamber and suspended on a horizontal shaft passing through the centre of the inner casing, on which they revolve.

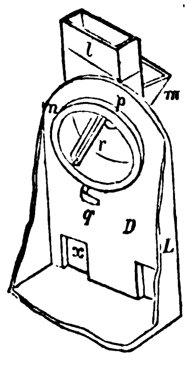


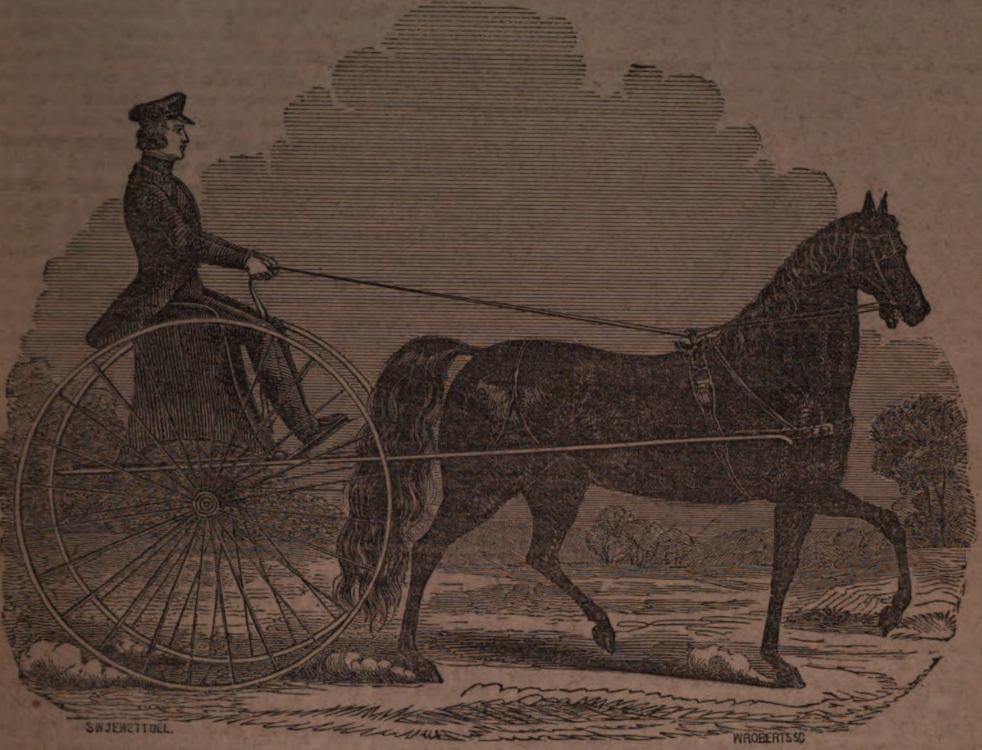
Fig. 2.

In the accompanying drawing, fig. 1 is a vertical longitudinal section through the centre of my kiln-drying apparatus; and fig. 2 is a perspective elevation of the interior side of the head or front end of the heating chamber, detached from the other parts of the same. Similar letters refer to corresponding parts in both figures. *A*, is the interior; *B*, is the central, and *C*, is the exterior concentric casing; *e*, is the annular space between the casings *A* and *B*; and *f* is the annular space between the casings *B* and *C*; *R*, is the chamber, enclosing the combined concentric casings; the enclosing wall *L*, of the chamber *R*, may be composed of brick or other suitable material; *t*, is the horizontal shaft passing through the centre of the combined concentric casings; *v*, *v*, are radial arms by which it is secured to the front end of the same; *V* is a head which closes up the rear end of the inner concentric casing. The shaft *t*, has its bearing in the head *D*, and rear end of the heating chamber, *R*; at its rear end a crank *w*, or a pulley, or cog wheel, is attached, for the purpose of communicating motion to the combined concentric casings. On the rear side of the head *D*, of the chamber *R*, circular projecting flanges *n* and *p*, are secured concentric with each other, the inner circular flange, *n*, passes a few inches within the front end of the inner concentric casing *A*, fitting accurately to the same. The exterior flange P, fits accurately to the central concentric casing *B*, and passes a few inches within the same; the annular space between the circular flanges, *n* and *p*, communicates with the chimney *l*, and connects the annular space *e*, with the same. *J* is a furnace, placed at the front end of the chamber *R*, underneath the combined concentric casings, constructed in any well known or usual manner; *i*, are the grate bars; *x*, are the furnace doors.

The heat of the furnace, and gaseous products of combustion, first act upon the exterior surface of the outer concentric casings *C*, (as it is revolved.) from front to rear; at the rear end they enter the annular space *e*, and are carried forward through the same to the chimney *l*, acting upon the exterior surface of the casing *A*, and the interior surface of the casing *B*.

The grain (or other substance) to be kiln-dryed, is placed in a receptacle or hopper *m*, attached to the front head *D*, of the chamber *R*, and passes through a spout *r*, into the heating chamber *A*, within the interior of the inner casing *A*; here it is acted upon by the heat occasioned by the passage of the hot air and gases from the furnace, through the annular flue space *e*, to the chimney, and is gradually carried from the front to the rear end of the circular heating chamber *A*, by the rotary action of the continuous spiral thread *d*, projecting from its interior surface.

The grain being carried to the rear end of the chamber *A*, against the head *v*, which closes up the same, falls through connecting tubes *h*, *h*, into the annular space *f*, between the concentric casings *B* and *C*. In the annular space *f*, a spiral thread *g*, is placed, winding around in the same from rear to front, in a reversed position to that in the chamber *A*, which carries the grain back again to the front end of the concentric casings by the rotary action of the same, arriving at which, a hook *q*, attached to the front end *D*, of the chamber *R*, and extending into the annular space *f*, takes the grain


S.W.JEWETT DEL.
W.ROBERTS SC.

THE MORGAN HORSE, "BLACK HAWK."

from the spiral thread *g*, and forces it into the discharge spout *k*.

The grain, during its passage through the annular space *f*, is acted upon by heat on both its enclosing surfaces at the same time; the casing *C* being acted upon directly by the heat of the furnace, and the casing *B* by the hot air and gaseous products of combustion in their passage from the furnace through the annular flue space *e*, to the chimney.

It will clearly be perceived, as a very valuable feature in my kiln-drying apparatus, that the heating surfaces over which the grain passes, are regularly and constantly increasing in temperature, from the point where the grain enters the circular chamber *A*, to that where it is discharged out of the annular space *f*; this feature, combined with the constantly progressive rotary motion, causes every particle of grain to be equally operated on by heat, without danger of injury from scorching, if proper attention be paid to the furnace.

The red arrows in fig. 1, represent the course of the wheat from the receptacle *m*, through the chamber *A*, and annular space *f*, to the discharge spout *k*; the black arrows represent the course of the hot air and gaseous products of combustion from the furnace to the chimney. I design using my rotary cylindrical grain-dryer, not only for kiln-drying grain of all kinds, but also for drying malt, salt, and every other substance it can be used for, and for the roasting of coffee.

Having thus fully described the construction and operation of my rotary cylindrical grain dryer, what I claim herein as new, and desire to secure by letters patent, is the uniting the cylindrical casings *A*, *B*, and *C*, with each other, and combining them with the furnace *J*, in such a manner as to form a circular heating or drying chamber *A*, within the inner casing *A*; an annular space or drying chamber *f*, connected with the same between the outer casing *C*, and central casing B, and an annular flue space *e*, between the central casing *B* and inner casing *A*, substantially as herein set forth.

I also claim the giving the grain or other substance acted upon, a constantly progressive rotary movement from the front to the rear end of the circular drying chamber *A*,—conducting it into the annular space or drying chamber *f*, and returning the same by a reversed movement to its front end, and discharging the kiln-dried grain at the spout *k*, by the action of the projecting spiral thread *d*, connecting pipes *h*, *h*, and spiral thread *g*, combined and operating substantially in the manner and for the purpose herein set forth. SEBRE HOWARD.

"BLACK HAWK."

EDITORS OF CULTIVATOR—About two years since I furnished you a drawing of Messrs. HILLS' horse "Black Hawk," with a description of that animal, and the Morgan stock in general; all of which was published in the June number of your periodical, and which elicited corroborating remarks from connoisseurs of the horse.

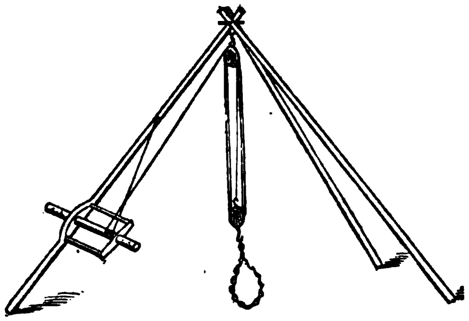
Too much, in my opinion, has not been said in praise of this perfect "Yankee Harness Horse," and the Morgans in general. His stock, most of them, outdo their sire in size. I saw several colts of his get, coming two this season, weighed, some months since, their weights varying from 800 to 1000 pounds. These colts exhibit great action, and are sprightly, mild and attractive.

By the request of the Messrs. HILL, I have sent another drawing of this noted horse, exhibiting him in harness, to the engraver; the cut I presume will be furnished you this month, and I hope to see a perfect figure and representation of the animal. I am happy to inform you that he will be on the ground at your next State show, together with some of his stock.

Weybridge, Vt., April, 1847. SOLOMON W. JEWETT.

[For a challenge in reference to "Black Hawk," see advertisement in this number.]

THE FARMER'S NOTE BOOK.



Gin for Loading Logs and Stone.—I noticed a communication in one of the numbers of the Cultivator for last year, containing an inquiry for a machine with which one or two men could load large stone, on a wagon. As no one has responded to that inquiry, and as I have a gin for that purpose, I thought it not improper to transmit to you for publication, a diagram and description of it.

I constructed one of this kind of gins, a few years since, for the purpose of loading *saw-logs* on a wagon, and I found it to be a machine of *great utility*, for this and for *other* purposes; and especially for hoisting large stone high enough to place them on a wagon. It is a machine of great mechanical power, simple in its construction, and can be handled and worked by one man with great facility. As a portable gin for loading large stone, for lifting stone from a quarry, for loading timber on wheels, and for many other purposes, I think it cannot be surpassed.

The shears, or "gin poles," as some call them, are fourteen feet in length, and supported at the top by an iron bar eighteen inches long, made fast in the shear which has the windlass attached to it. The other two shears have an inch and a half hole near the top, into which the iron bar enters when the shears are erect. The holes must be large, so that the lower ends of the shears may be placed at some distance asunder. You will see by the cut, that the slack rope of the tackles, winds on the windlass, which is turned by wooden bars, which are thrust into holes near the end of it. A few notches are cut in the windlass, into which a follower drops, to prevent its turning backwards.

If it is desirable to apply more power, a system of cog-wheels, with a crank on the shaft of the smallest one, may be placed where the windlass is. (I once attached a couple of cog-wheels to my gin; and with it a lad could elevate a ton or more with ease.)

When I load saw-logs with this gin, if the tackle rope is strong enough, I hitch the chain near the middle of the log, and back the wagon under it. If it is very heavy, elevate one end, and let it rest on the forward part of the wagon, while the other end is raised high enough for the hinder part of the wagon to pass under; and to be coupled to the fore part. To unload a log, place two rails on the wagon, one on either side of the log, and pry up the forward end, and lay a roller on the two rails under the log, and push it off the hind end of the wagon. In order to load large stone, elevate them high enough to back the wagon under, and let them drop on it. If the stone are not very large, a single rope, passing over the upper pulley and to the windlass is sufficient. A gin constructed in this manner is very useful in elevating earth, when digging a well, and also to let down stone for the wall.

My gin cost me $2.50, besides half a day's work, making it. Tackle blocks, $1.25. Rope, 75 cts. Iron bar to support the upper ends, and the timber, 50 cts.

Thus you will perceive that this gin is "*multum in parvo*," in every point of view. With it one man can perform what *ten* men could not without it; and if you consider it worthy of a place in your paper, it is at your disposal. S. E. Todd. *Lansing, Tompkins Co.. N. Y.*, 1847.

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Insect in Clover Seed.—After a great deal of search, I have found the clover seed fly. and herewith enclose two of the insects between two small pieces of mica. I hope they will attract the attention of some entomologist. I have examined them with a microscope, with the intention of having a drawing made from them; but finding it more difficult than I expected. I solicited the aid of Mr. Witherell, Prof. of Chemistry and Mathematics in the Ithaca Academy. He examined the fly, and found it a different species from any he had seen before.

The insect eats the clover seed in the fall and latter part of summer. I have known the seed that ripens with the first growth of the clover, almost eat up by it. At the time it was mowed it appeared to be well-filled, with seed. Some seasons they destroy from one-third to one-half of my crop. The worm commences its work on the outside of the seeds, and eats all but the part that is next to the stem, so that if the chit of the seed is left it will grow, although it may not be more than a fourth part of the seed.

The way I detected the fly was this: About the first of October last, I rubbed out some seed by hand, and selected some which I knew had worms in it, and put it in a small vial, over the mouth of which a paper was tied, with small holes made through it. and hung the vial up in the room. The flies began to hatch out about the first of February. When they first appear they are almost white, but as they become older they turn brown. Those I send you were three or four days old when they were put under the microscope. Their natural shape may have been somewhat altered by pressure between the pieces of mica. I regret that I could not send them to you alive. Henry Brewer. *Enfield. Tompkins Co N. Y. March* 1. 1847.

[The insect forwarded by Mr. Brewer, is too much mutilated to enable us to form any useful conclusions from an examination of it. We are inclined to think it is different from anything we have before seen; but we can form no idea of the manner in which it attacks the clover-seed. We would thank Mr. B. to send us some seed which has been eaten by the worm. and at the proper season, some which has the egg in the seed, that we may see the insect in all its stages.—Eds.]

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American Agricultural Books.—In the December number of Mr. Downing's usually candid and liberal Horticultural Magazine, I find an article which speaks in so depreciating a manner of what have seemed to me meritorious publications, that I am induced to take up a little of your room for the purpose of inquiring into the merits of the case. The article in question is a review of Mr. Allen's "American Agriculture." This book I have not sen, but am ready to believe all the good that is said of it. The passage which attracted my attention is the following:

"What American farmers want, as we conceive, at the present moment, are plain and sensible reasons for our *best* agricultural practice, *as it is*, and equally common sense hints and directions *for its improvement*. Books written upon such a plan, by competent men, will go a thousand times farther toward making good husbandmen, and improving those already skillful, than a republication of all the elaborate French, English, or German systems of draining, subsoiling, and irrigating, that the best authors on the other side of the Atlantic have yet produced."

Now Mr. Downing has done more than any one else to give an impulse, in this country, to an improved taste in rural architecture, landscape gardening, and horticulture; but what sort of figure would his book on architecture have made, had he been limited to the ground he marks out for agricultural writers? How would it sound to him to be bidden to write a book of "plain and sensible reasons for our best architectural practice as it is, and *equally* common-sense hints and directions for its improvement?" It does not accuse him of plagiarism to say that without recourse to Gilpin, Price, Loudon, and others, his works would hardly have been so complete. Nay, he will probably allow that no one can have a sound judgment in architecture who is not acquainted with the theory and practice of the best masters in all the styles.

This mode of treating a subject, and this alone, raises it to the rank of a liberal art or profession. We demand that the soil shall cultivate the man, while the man cultivates the soil. Again Mr. Downing says,

"It is idle to lay before farmers, in a country like ours, where capital is rarely or never employed in farming—where land is plentiful, but labor scarce and dear—systems of farming, based on just the contrary state of things—where farming is carried on with abundant capital, and where the price of labor and means of tillage are such, that it will pay a good interest upon the capital employed. It is very much like discoursing to the keeper of a 'country store,' upon the large principles of commerce which govern the transactions of such houses as the Barings, or Brown, Brothers & Co."

Now, I would contend that the *principles* of commerce, by which the storekeeper is to be guided, are identically the same with those by which Browns or Barings must be guided. It is only the practice, the detail, that differs. And this makes the difference between man and man, that one sees only the detail in what he does; the other sees the principle that must apply in all similar cases. There can be no thorough knowledge of the principles of any art, without a knowledge of the practice in all those places where the art is best practised.

I cannot agree that our farmers have no capital. Every farmer has a farm, house, barn, stock, crops, perhaps $5000, perhaps $10,000. Is not this a capital? It is invested, to be sure, in his business, like that of every other business man. Moreover, he has an income, say $250 or $500 in cash, over and above the living of his family. What does he do with it? Buys more land, or lets it out on interest. And this I conceive to be one of the greatest evils in our farming—the abuse of capital. It is not universal, but it is too common that the farmer who has risen to wealth, who has his $5,000 or $10,000 at interest, owns no more plows, and has no better stock, or barns, than his poorer neighbor.

I am no advocate of English practice for our farmers; but I am an advocate of principles whereever I find them. Any man would be a better farmer for reading Jethro Tull's book on Horse-hoeing Husbandry, yet Tull will persuade no man to forego the use of manure. Any man will be a better plow-maker for reading Stephen's account of the Scotch plow, yet he will not attempt to persuade our farmers to buy plows at $25 apiece. Judge Buel, in the Farmer's Instructor, gives instructions in plowing "compiled" from Low's Agriculture, that will make any man a better plowman; yet we need not enter into all the mysteries of "twice-gathering" and "cleaving down with gore-furrows."

But after all, what do we not owe to English agriculture; for we are bound to be just, and "give the devil his due." In the plow, if they owe something to us, we owe vastly more to them. The cultivator is English, and our cultivator is yet far behind several of theirs. The harrow we have not improved upon in any essential. The subsoil plow is English. We have adopted all these things with great skill. We have excellent plows at a fourth the cost; we make our implements light, cheap, and strong; but not yet so thorough nor so perfect in their work.

But I am getting away from my object, which was to deprecate, and enter my protest against the disparagement of any attempt towards the formation of a library for our farmers, not of books only that shall be written expressly for them, on the principle of a Sunday school library for children, where pains are taken that they may learn no harm, but of books from any language, in the reading and choosing and application of which, farmers may use their own faculties, and learn to apply principles from whatever quarter they may come.' W. *Lenox, 18th Feb.*, 1847.

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To Improve an Agricultural Paper.—In a recent number of your periodical, we threw out a few hints in reference to obtaining subscribers for that and similar publications. We now propose, as many of our farmers are not satisfied in regard to the practical value of such papers, to offer a few suggestions, which, if they, the farmers, will carry into practice, we have no doubt will render them so truly acceptable that they will be considered an indispensible requisite of every farming establishment.

First, then, we say *to you, farmers*, subscribe for an agricultural paper forthwith, and pay in advance, for much depends on the number of subscribers, and the promptness of payment in making these papers truly valuable. The editor must study much in order to meet all the exigencies that await him in furnishing his patrons with intellectual food, and in order to do this he must have scientific works around him for reference and comparison, in order that he can bring forth facts in their most substantial and living form, to establish fixed and immutable principles. Such works as are not only convenient but necessary for him to possess. are not to be found among the cheap literature of story and song which some shallow-brained novelist or shattered poet has written, to while away an idle hour, and gull a host of voracious readers, whose imaginations are as sickly, and whose ideas are as vapid as his own. Such works as he must have are expensive; they are the fruit of minds given to toil, and who, after all their labor, it may be, meet with but a scanty reward for the service they have endured.

Then, again, the illustrations are expensive. Their importance in giving value to agricultural works, no one will question. They explain the mysterious and illuminate the dark. They place subjects before the mind clearly, which without their aid would be incomprehensible. But they cannot be formed of soap bubbles. No, they must be drawn on solid basis, with taste and correctness or they are valueless. This, too, is an expensive business, and one that can be supported only by those who appreciate and stand with open hands to sustain it. Every name that is added to the subscription list, then, goes to help improve the *character* of the paper, by giving the editor new means of increasing his own amount of knowledge, and placing funds in his hands, whereby he can give descriptive views of that knowledge more frequently, and in better style. Let every farmer, then, give his aid in improving the "agricultural paper," by subscribing for its support, and inducing his neighbors, if possible, to unite with him in so simple and noble an enterprize. It is a very common plea with farmers, that they do not think the paper adapted to their climate or their soil. It may not, it is true, in many particulars. Do the physician's books lead him to remedies for every grade of the diseases on which they treat, or the "reports" on which the lawyer predicates his opinions of the fairness of his client's suit, bring cases strictly parallel to those on which hope of success depends? No, these things would be utterly impossible. They establish general principles, from which the observation and keen discernment can gather facts, which, by varying to meet new cases, different in form, but the same in principle, go not to establish new facts, but by an extended ramification of old ones, to bear on the case at issue, and thus give a confirmation to principles already laid down, whereby each particular object of research may be supported and attained.

It is a truth not to be denied, that farmers are not minute enough in their narrations, in giving particulars with regard to soil, climate, and mode of proceeding; but if this were all done, similar soils vary in productive character in different localities, so that no positive rule can be given in any case where the same causes will produce precisely similar effects, and the variations may result in the same town or neighborhood, as well as if the districts were more remote. So we may fairly infer, that agriculture, as a profession, can never be reduced to a system of managing, by definitely prescribed rules, or voluminous recipes, but like the physician or the lawyer, the farmer may have his general principles treasured in his library, from which he can draw them as necessity requires, and combine them with his close observation, and apply them by his active and discriminative judgment, to result in desirable effects.

But we will name another way whereby the agricultural paper can be improved. Keep notes, and send in for publication, the result of *your own experience*, and in doing this, enter as minutely into the matter as you please. This will result in one benefit at least. It will cut off your neighbor from the everlasting excuse you have so long made, "I don't think the paper adapted to our soil." Go *on*, we say, by your own wise efforts make it better, by making it "more practical," and more beneficial to your neighbors. Yes, ye brilliant ones, who have such an eye to see the darkness around you, let your light burst forth and dispel *that darkness* and gloom with which prejudice and ignorance are to pass away. W. BACON. *Richmond*, 1847.

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DETAIL OF EXPERIENCE IN FARMING.—I have read the Cultivator a long time, and find it full of entertaining matter. I here give you a short account of a long experience in farming. In 1795, I commenced for myself, in the town of Stanford, Dutchess county, N. Y. My father said he could not help me any, but I might sow the "hill lot" with rye. It was a thin, slaty soil —no water in the lot, and on that account had never been laid to pasture, but had always been sown to rye or buckwheat as long as I could remember. I summer-fallowed it, plowed deep, bringing the sweat out of the team pretty profusely. In the fall I sowed it with wheat. Next harvest I had the best wheat in the neighborhood.

Now this shows two things, that rye does not much exhaust the land for wheat, and that by frequent and deep plowings, some land can be recruited without much manure.

In 1798 or '99, I ran in debt for a farm in what was called the "Little Nine Partners." It appeared to be a poor slaty soil; all the plow fields on the farm had been sown to rye for a number of years. I summer-fallowed, clovered, and plastered, and got up the name of the farm, sold it, and bought a better farm in Red Hook. The soil of that was sandy and dry. I managed it as I had done the other. My Dutch neighbors taught me something about raising wheat.

I next bought a farm in the town of Schodack, Rensselaer county, N. Y. After living there some years, I bought a piece of worn-out land, about thirty acres, adjoining the farm, of a sandy and cobble-stone soil. Soon after planting, I broke it up, and gave it a good coat of plaster, harrowing it over several times in the course of the summer, kept it clean from weeds, and in the fall sowed it with wheat, and had a good crop. I stocked it down in the spring with clover. It is called a good lot to this day.

I merely tell this that farmers need not be afraid to purchase what is called "worn-out land," provided it is not too wet. Let farmers manure as much as they can. I now live where we need but little manure; but the decree has gone forth, and is as true as the book of Genesis:—"thorns and thistles shall the earth bring forth, and in the sweat of thy face shalt thou eat bread all the days of thy life." From this there is no escape. WM. CANFIELD. *Granville, Ohio, March*, 1847.

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AGRICULTURAL CAPABILITIES OF GEORGIA.—I have recently moved from the flat, low lands of Burke, for health's sake, to the hilly section of middle Georgia. This part of the country is as broken as any part of New England, but there are no high elevations. The streams are numerous, and most of them are bordered by very fertile, low grounds.

The hill-sides were originally free, productive lands, and where the soil still remains, are yet good, but the system of skimimng with a set of queer shaped irons, misnamed plows, which loosen about as much of the surface as the summer's rains can easily carry down the steep hill-sides, into the creeks and bottoms, has left this part of the state shorn of its primitive fertility and beauty, and it now presents a mournful spectacle of galls and gullies, and denuded hill-sides, the unmistakeable indications of an erroneous system of cultivation.

Yet there is much of this country, that with proper management may be brought back to a state of fertility, and is not surpassed for advantages of location, perhaps in the world.

There is probably no country in which can be produced a greater number of the staple commodities and luxuries of life, than middle Georgia. Cotton, all the grains and fruits of the northern and middle states, thrive here exceedingly well. In fact, I have seen some fine crops of wheat raised here, under no other culture than being sown upon the unbroken ground, and plowed in with a bull-tongue plow.

Many of the fruits of warm climates thrive well, as grapes, figs, almonds, apricots, pomegranates, &c. All valuable roots and tubers, from a pea-nut to a sweet potato, we have, (or can have,) in abundance.

There are here, generally, two varieties of soil; the stiff red land, with a subsoil of pure red clay; and upon the surface a large quantity of white silicious rock is disseminated in small fragments, so as in some situations, to nearly cover the whole surface, but not to a depth to materially obstruct the cultivation. This soil requires a great amount of rain, through the growing season to produce well, but with this, it usually yields abundant returns for the labor bestowed. The farmers upon this soil usually do not break it to a greater depth than two or three inches. If it were subsoiled to the depth of a foot, it would probably stand drouth much better. This soil is well suited to Indian corn, and the smaller grains. The other variety is a gray land, formed, I think, from the detritus, or decomposition of granite, gneiss, and a greenish rock, into the formation of which hornblende enters largely.

There are numerous examples of the decomposing of granite boulders in this section, in all stages of decomposition. They seem to crumble down into their original elements.

This gray soil is better adapted to cotton and roots; the different varieties of the sweet potato flourish finely in the gray soil, as also peach and other fruit trees.

There is an intermediate soil, possessing eminently the advantages of both, called "*mulatto*" land, of a chocolate color, with a very stiff clay subsoil. This is remarkably good; but neither this nor the red land is as sure as the gray, because a short drouth does not affect the gray as it does the others.

The gray land is mostly quite porous, containing much of the gravel formed by the crumbling of the granite. These soils are frequently found only separated by a narrow drain, the opposite sides of which are marked with great distinctness, being often in perfect contrast. Sometimes they run into each other by insensible gradations.

Now, if a chemical analysis was entered into to determine the most suitable manure for these soils, is it not reasonable that a distinct analysis should be instituted for different parts of a field, according to the different variety of soil presented upon the surface? These lands can be purchased of farmers wishing to go west, for from two to three dollars per acre, and are readily improved; farms often containing a portion of low-grounds or creek bottom, worth at least twenty-five dollars per acre.

Timber is getting scarce on some farms. Will chestnut bear transplanting? If it will, abundance of it can be procured on the poorer ridges in this section.

This I consider a favorable location for northern emigrants, who wish to change their residence on account of pulmonary diseases. PAUL DAVIDSON. *Raytown, Ga., Feb.* 8, 1848.

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ANALYSIS OF VEGETABLES.—Permit me to ask you to compile, and present in a table through the Cultivator, an analysis of the following plants and vegetables: Indian corn, barley, wheat, rye, oats, sweet potato or yam, cow pea, carrot, turnep, cabbage, beet, celery, leek, onion, asparagus, lettuce, and radish. It cannot but be apparent to you, that my purpose is to ascertain what manures to apply to the production of the above named vegetables, and especially to those soils from which, by previous and continued cultivation, those substances essential to the growth of a plant on the same piece of land have been taken away. Leibig and other great chemists have taught us the relative value of manures; but I am in the dark as to the constituents of plants, and hence my application to you, as I desire to avoid the waste of my manures in random *guesses*, in attempting to supply a supposed deficiency in my soil. H. *Milledgeville, Geo., Feb.*, 1847.

[If any one can furnish us with an analysis comprising the information above called for, we shall feel obliged; for ourselves, we know of no table which comprehends it.—EDS.]

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TRAINING HEIFERS.—As I have never seen in your paper any plan of treating heifers, when they first calve, and afterwards, until they are gentle to milk, I will give you a few hints. The first thing is to be kind to them, for a kind pat of the hand, with a gentle tone of the voice, will often do more good than all the knotty poles that have been broken over their backs. As soon as the calf is dropped, go immediately to them and handle the teats as if going to milk, which is often necessary and they will bear it much better than they will after the bag has become feverish and sore. If the bag is likely to cake before calving, grease it with some soft grease. After the calf is strong enough to leave the cow, confine him in one place, and always put the cow to the calf, and not the calf to the cow. Handle the teats, also, to get her accustomed to being milked. When the calf is old enough to wean or slaughter, put the heifer in the same place still; she will readily be milked, and will not mourn for her calf as she will when treated differently. The advantage of this kind of treatment is, heifers readily give their milk down at a time and in a place to which they have been accustomed.

Cows treated in this way, frequently, never miss their calves, which saves them from very unpleasant feelings, and their masters from one of the unpleasantest sounds that ever was heard from a dumb beast. I speak from thirty-five years' experience in breaking heifers, and have never had to fat a single heifer, or cheat some one else with her because I could not milk her myself. A. W. ST. JOHN. *Darien, Ct., March 4th*, 1847.

P. S.—There is one thing, if it were more generally practiced, would be an advantage. In advertising, cattle, sheep, hogs, poultry, or anything else, we are unable to form an opinion about purchasing, unless we know the cost. Would it not be better to have the price mentioned?

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ORIGIN OF THE MORGAN HORSES.—There seem to be some persons who still continue to suppose that there was "French Canadian" blood in the original horse which belonged to my father, Justin Morgan, and from which the excellent stock of "Morgan horses" sprung; while no one who has attended to the clear proofs to the contrary, which have from time to time appeared in your valuable journal, can now justly entertain any such notion.

In the fall of 1795, my father brought the horse, then a two years old colt, from Springfield, Massachusetts, to Randolph, Vermont. Mr. John Morgan, of Lima, N. Y., who, though of the same name, is but a distant relative of my father's family, then lived, as I have been informed, in Springfield, and had every opportunity, as I believe, of knowing the truth in relation to the horse.

Mr. J. Morgan says he was not only well acquainted with my father's horse, but also with the sire of that horse, "True Briton, or Beautiful Bay;" and he states that he, (Mr. J. M.) kept the latter horse at the time my father's colt was begotten by him. He says also, that he was acquainted with "Traveller," "Diamond," and "Wild Air," and at the time knew them to be English blood horses. Mr. John Morgan further says, that however much may have been said relative to my father having brought the horse from Canada, he knows that it was not so. His means of knowledge, and the respectability of his character, entitles his statements to the fullest credit.

The fact that my father died about two and a half years after he brought the colt into Randolph, his children all being young, and the horse having been sold out of the family very soon after my father's decease, may account for his pedigree not being better understood.

I have a perfect recollection of the horse when my father owned him and afterwards, and have always lived where his stock is well known, and well remember that my father always spoke of him as a horse of the best blood. I remember that two running horses—one, I believe, from Long Island, called "Sweepstakes," the other, I think, from the north part of the state of New-York, called "Silvertail,"—had races with him in my father's life time, when his horse was but four years old, for a considerable sum, for those days, and they were both beaten by him with ease. I was present at Brookfield, Vt., although then but a small boy, and

and witnessed the race with "Sweepstakes." My father's horse was not only a swift runner, but a very fast trotter. Those who have seen the "Gifford Morgan," will have a very correct idea of the size, shape, style, and action of the original Morgan horse, as the resemblance between them is very close, not only in those particulars, but most others, except color. The stock, also, of the "Gifford Morgan," with which I have always been well acquainted, is very similar to that of the original horse.

I consider it a very fortunate circumstance that the attention of the public has at length become awakened to the great value and importance of the Morgan stock of horses, in season to save the blood in such purity as we yet have it in some individuals. A few more years of indifference and delay would have insured its loss beyond the possibility of recovery. Justin Morgan. *Stockbridge, Vt., Feb. 27, 1847.*

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Summer Fallowing for Wheat.—To procure a good crop of wheat, no means are more certain than a summer fallow; it not only benefits the present but future crops; most especially so on those soils wherein clay predominates. Fallowing, when skillfully performed, not only loosens the soil, but also, by absorption, improves it; that is, the various gases which are evolved from vegetable decompositions, and float in the atmosphere, are absorbed by the earth, and there retained for the nourishment of future growths. Rain water is frequently impregnated with these gases, and by it they are carried to the soil. Another effect of fallowing is to offer different portions of the soil to the sun, the rays of which act powerfully on its chemical combinations, and by heat, put in action the great galvanic battery of nature. Fallowing, also, when properly done, destroys much that should not grow in a wheat field; and it is to this part that I shall confine my attention.

I prefer for a fallow, ground that has been one season in corn, which should be turned over as shallow as it can be, to be well done. The object in this shallow plowing, is to place those seeds which are within three or four inches of the surface, in such position that germination will take place. Many seeds, when placed five or six inches from the surface, will not grow at all; but remain inert. Cockle is one of these, and I have evidence sufficient for me to believe that it will lay in the ground inert for a number of years, (I think five or more,) and then, if placed suitably, will grow. Clover seed will remain under a sod for eighteen months and then grow. Shallow plowing, in the first instance, does not place seeds so low but they will vegetate freely. If the field be a sward, and it can be inverted at three inches, I should suppose it deep enough, and as to time, I would do it about the first of sixth month, [June.] or during that month. In a week or ten days, I would harrow it well, lengthwise the furrows, which will materially assist the vegetation of seeds in the soil. In six weeks from the first plowing, stir it crossways not less than six or seven inches deep. If a sod, it will hardly be sufficiently decomposed for this, so early, and may need one or two harrowings before it will be. The fore part of eighth month, [August,] give it a plowing, as deep as it can well be done, so as to move an inch or more of the subsoil. This mode is the most effectual to remove pests from the crops, of any I have seen tried, and greatly does it improve the earth, and will, I believe, generally well repay the expense. Apropos to this:—In the summer of 1842, I broke a piece for wheat, which was a stiff timothy sod—soil limestone clay. It was done in the sixth month. A fence had been moved from one side of it the preceding year, and the old row planted with potatoes. This potato patch was frequently stirred in 1842, and in the 8th month I commenced stirring, making the place where the year before I raised the Mercers, part of the first "land." From the partial decomposition of the sod, I was induced to quit with but one land. Early in the 9th month, it was all plowed and seeded. In the tenth month, (1st of it,) it appeared beautiful—but the fly commenced its ravages, and with the exception of that one land they denuded the field till it was bare as a road, and that land was as distinctly marked as a plow could have done it. The wheat on it was thick, while the other with re-sowing was thin. I leave others to judge of the cause. Rob't Hatton. *Richmond, Ind.*, 1847.

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Agricultural Papers—Recipe for Sweeny.—I am sorry to say that some farmers are opposed to "book-farming" as they call it, and will not read an agricultural paper. Yet, there is a prospect of better things. I have lent quite a number of copies of the Cultivator to some of our best farmers, who are well pleased with the work, and I have hopes of being able to send more names soon. I presume you know that this county is one of the lumbering counties of Pennsylvania, and consequently very little attention is paid to farming; yet we have some excellent land, and for two years back, there has been a large overplus of all kinds of grain. It is an excellent county for fruit, and last fall a number of orchards of choice fruit were planted. And as timber in many parts of this county is getting scarce, more attention will be paid to farming.

I have a recipe for the sweeny in horses. It may be new to some of the readers of the Cultivator. I can safely say it is the best and cheapest remedy for that complaint I ever knew or tried. I have driven teams and owned horses for a number of years.

Take one quart of upshot whiskey, or fourth proof brandy, two ounces gum camphor, two ounces ground cloves, nine pods red pepper, one table spoonful alum salt. Let it stand twenty-four hours; then rub the affected part three times in twenty-four hours. When the first quart is used, put a quart of brandy or whiskey on the grounds, and use as before. John Miles. *Curwensville, Feb. 20th,* 1847.

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Western Virginia.—J. C. McGrew, Esq., of Kingwood, Preston Co., Va., writes—"Western Virginia, possesses, I believe, as great physical resources advantages, and adaptation for manufacturing, for agriculture, and *grazing*, combined, as any country in the world, and nothing is wanting but enterprize and skill, to develop fully and profitably these resources."

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Potato Starch.—Can you give me any information concerning the manufacture of potato starch? I wish to put up a machine to be worked by horse power, but I cannot find any person capable of constructing a machine for grinding the potatoes. I have made an experimental machine, with a drum sixteen inches in diameter, covered with a tin grater; but I cannot make it feed itself without clogging. What is the proper size of a drum to work to the best advantage? and how should the hopper be constructed to make it feed without clogging or breaking the potatoes? I wish to know, also, how many pounds of starch can be made from a bushel of good potatoes, and what is the starch worth per pound by the quantity? Maine.

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The past winter in Maryland—Farmer's Clubs. Our winter has been very mild—not much ice, and some of our ice-houses have not an ounce in them.

I have been an observer of the Hessian fly for nearly 20 years, and I do not remember to have seen the insect in the "flax-seed" state in the month of February before this winter.

In your February number I see mention of "Farmers' Clubs." They are, in my judgment, among the best means that can be devised for the benefit of the farming interest. The object of every member should be to give his views in as condensed a manner as accuracy will allow, and after the club has received the views of each member, (all of whom should be practical farmers,) a committee of not more than three should be appointed to review and prepare the matter for publication. MARTIN GOLDSBOROUGH. *Trappe, Md., March*, 1847.

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STEAMING APPARATUS.—The steaming apparatus which "*Subscriber*" enquires for in the April number, I think could be had of N. Britton, Buffalo. He made a small one for us upon a plan of which he held the patent, that works admirably. Ours is used in the winter in the candle factory, for heating and clarifying tallow, and in the summer in the dairy. It is not large; two persons can carry it easily full of water, as they might do of the size necessary to do the work required by "*Subscriber*." I cannot give him any good idea of it without drawings, and these I cannot make. They are made of copper, and I saw a small hand one, in his shop which had been exchanged for a larger size, that if not sold, would be just the thing. They require no brick work, and can be used any where when you can get ten feet of stove pipe, and are as safe as a common stove. If "Subscriber" were to write to Mr. Britton, I think he would get a correct idea of the "*steamer*." T. C. PETERS. *Darien, April 7th*, 1847.

If your correspondent, who wishes information as to a steam apparatus, will call on me at this place, he can see one, although not now in operation, once used by me at a large feeding establishment, which is very complete; the boiler weighs 300 lbs., is large and very strong, and its valves and apparatus as perfect as can be. I have steamed with it the quantity of chaff he wishes, in one hour after the steam was up, and cooked a 120 gallon hogshead of potatoes in 22 minutes. As to the benefit resulting from its use, from actual experiment, I found it very great, especially for cows in winter; the only difficulty, being one too common in this country, to find a man to obey orders and manage it as it should be done. The business for which it was used one year being discontinued, I would sell it; it cost $150, and should your correspondent fancy it, he can have it for half that sum.—W. H. DENNING. *Dutchess Co., Fishkill Landing, April* 4, 1847.

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CURE FOR "HORSE CHOLERA."—A correspondent wishes us to republish the following from the *Brooklyn Advocate*. The recipe, he says, is a certain cure for the "horse cholera," which was so destructive on Long Island last summer:

"As soon as it is discovered that the horse is seized with the epidemic, take four qts. of brine from the pork or beef barrel, and pour it down his throat; which must be immediately followed with a dose of castor oil, say 1 pint; then bleed in the nostrils. Rub well the nostrils, forehead, and crown, with a solution of camphor and alcohol; lastly, take red pepper from the garden, and rub the forehead and crown until blisters are raised. If these remedies are applied in time the horse will find relief immediately, or shortly after the blisters are raised. If not, nor in a number of hours after, in nineteen cases out of twenty, death is certain, let what may be resorted to."

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RURAL ARCHITECTURE.—I was much pleased with the articles of "H., OF ONEIDA CO.," and "T.," in your March number, and should be glad to see the plans of both gentlemen tried in this section. I have not the slightest doubt that a house can be built of *unburnt brick*, with the vertical board covering, which will be superior in every respect to a common brick house, at half the expense of the latter. At any rate, I shall try the experiment the coming season, and send you the result. Will "J. J. T.," or some other person, be kind enough to inform me whether *uuburnt brick* can be made in the fall, dried, kept in an out-house exposed to frost all winter, and be fit for use the ensuing spring or summer? RURALIST. *New Hartford, N. Y.*

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"WOOL GROWING IN VIRGINIA."—Under this head, the *Southern Planter* publishes a letter dated "CORTLAND VILLAGE, N. Y., Feb. 4, 1847," and directed to "GEN. A. A. CHAPMAN, M. C." The letter is introduced by a note from Gen. C., in which it is said—

"You will perceive that the writer is a gentleman of the highest order of intelligence. He has been engaged for a number of years in sheep and wool growing, and is justly esteemed the most enlightened sheep breeder in the North; and moreover is said to be reliable and trust-worthy in all things."

It seems that Gen. C. had determined to purchase some sheep from "*the most enlightened breeder of the North*," and the "breeder" writes to inform him (Gen. C.,) that his order will be filled with "very great pleasure," "though," says he, "I could sell such sheep as I shall send you, for more money, by simply letting it be known that they are for sale."(! !)

In regard to wool-growing, the "breeder" observes that "the first cost of producing wool in this State, is 30 1-3 cents per pound," and that good wool has never been lower than 30 cents per pound; but he says, "Let it go down to 25 cents, and then with *my sheep* I can raise it at a *profit* on *my farm*, which cost $40 per acre." He observes however, that "it would, perhaps, be impossible to obtain (!) or breed *very large* flocks of equal quality to mine." (!!)

In reference to a market for wool produced in this country, it is said—"Do you ask where we are to find a market, if all go to growing wool? All over Europe! As I said a day or two since to Samuel Lawrence, the great manufacturer, * * * the lands of Germany are too high priced and too *poorly grassed* (the same is true of Spain.) to compete with us. * * * We can "beat" all the Austro-Oriental nations or regions, and we can, in fifty years, drive all the European nations *entirely out of the production of this staple*." (!!!)

The "breeder" next invites Gen. C. to look over some of the numbers of the *Farmers' Library and Monthly Journal of Agriculture*, in which he says he has been writing "a series of very elaborate articles on Sheep Husbandry at the South," and for which he says the publishers have requested me [him] to order engravings of sheep, barns, implements, &c., *ad libitum*."

The following language shows the *disinterestedness* of the "breeder." He says—"I never lose my interest in sheep sold by me, and I would rather at any time that a disaster should happen here in my own flock, than in any of those little colonies of mine which are starting up in so many parts of the United States (! !) * * * The introduction of sheep South, is a *hobby* with me, and if I can by-and-by be recognised as one of the prime movers in that great revolution which it will effect in your whole system of agriculture, my trophy will (*me ipse*) be worth *half* as much as one won in 'threshing' Mexican rancheros."

As to prices, the "breeder" states that he *frequently* "sold lots last season at from $35 to $50 "per head," but this year he has mostly "discouraged all Northern offers," that he may reserve the best of his flock, which he is willing to sell to Gen. C. or any southern "*gentleman*." (! !)

In regard to the selection of the sheep, the "breeder" says—"I need not say, sir, that the selection will be as favorable to you as if you yourself were present. I never could *induce* any individual in *this* county, where I have sold a great many, to select. It is universally insisted that I *shall* select." (!)

He states that he sent some sheep last year to the Choctaw station, "and owing to the admirable obedience of my [his] agents," they reached there, as he was informed, "hog fat."

Many persons would undoubtedly be much pleased to learn the name of this "intelligent" and "trust-worthy" sheep-breeder. It would be especially gratifying to know *how long* this superior stock or family of sheep has been in his hands, of how many it consists, and at what price his wool has sold, and if their great excellence has been attained by his "art of breeding," what particular system has been pursued, and through how long a period his experiments with this flock have extended? But seriously, I cannot but wonder, that any man in his senses should have considered this letter in any other light than that of a "humbug," as a specimen of which it is certainly a "rara avis." O. P. Q.

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The Season—Guano.—Extract of a letter, dated "Queens Co., April 6th, 1847.—Our farmers are generally preparing to sow their oats. Some few have done so already. The weather is unusually cold and wet for this season. Winter grains look very poor, especially such as are on heavy land. Our farmers have sold, the past winter, much corn at high prices—75 to 100 cts. per bushel. There have been some large purchases of Guano for use, the present season. One farmer has 15 tons for his own use. Those who used it last year, generally were pleased with it."

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Effect of example.—A correspondent at Simsbury, Ct., says that although the farmers in that vicinity are opposed to "book-farming," example has more or less influence on them. He cites an instance, as follows: "My father commenced putting swamp muck on his land, some of which is light and sandy. People passing by at the time shook their heads, and said it was of no use, it was a waste of labor; but he told them to wait and see. This was seven years ago; now all these farmers are carting muck themselves, into their yards and on to their lands, and they have greatly improved them."

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Killing Rats.—In the December number of the Cultivator for 1846, you give a recipe for destroying *rats*. Looking over a file of papers for 1830 and '31, I read that pulverized *cantharides*, spread on bread and butter, were a positive remedy for rats—that after partaking of the *dish*, they would leave the premises altogether. Alexander Leeds. *St. Joseph's, Mich.*

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An Important Trifle.—We see no reason why writers on farming and domestic economy should not be correct in the use of the English language; yet a very common blunder is committed by many of them, under a false notion of being very accurate and precise.

The plural of words is formed by adding *s* at the *end* of the singular, but in the instance alluded to, it is formed by crowding the *s* into the *middle* of the word, thus,—*spoonful* and *shovelful*, should, like all other single words, be changed to the plural by the addition of *s*, as *spoonfuls* and *shovelfuls*; and not by placing it in the middle, as *spoonsful* and *shovelsful*. If you wish to say three *spoons full*, this will of course be correct, for here there are two distinct words, fully spelled out, and the plural indicates the three implements or spoons used on the occasion; but the word spoonful designates a certain *quantity*, precisely as the word bushel does; and it is no more correct to say *three spoonsful*, than to say *three halfsbushel.* O.

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Exportation of Ice.—According to the "Horticulturist," New-England ice is shipped summer and winter, on voyages of 16,000 miles, crossing the equator twice, supplying vast ice-houses in the East Indies, and where it is constantly kept the whole year.

WOOL FOR THE ENGLISH MARKETS.

The season is close at hand when sheep must be sheared, and the wool prepared for market. Considerable of our wool has latterly been sent to England, and more of it might undoubtedly have been sent there to good advantage, but that the bad condition of American wool has greatly retarded its sale, and depreciated its value. Mr. Hamilton Gay, of New-York, who has been considerably engaged in the exportation of wool, stated in a circular issued last year in reference to the subject, that nearly all the wool sent to England from this country in 1845, was lessened in value to the amount of a penny, English, (about two cents,) per lb. in consequence of the "oil, yolk, and dirt." which the fleeces contained.

Mr. Gay directs that great care should be taken to wash the sheep thoroughly before shearing, and that they should be sheared as soon as they become dry. That in tying up the fleeces, the loose locks, clippings, and tags, and everything unclean, or of an inferior quality, together with the coarse wool from the thighs, if there be any, should be wholly rejected, and the fleeces tied up firmly, so as to keep their shape, and show, as is customary, the best part of the fleece on the outside.

In regard to packing and sacking, he directs that the wool, before it is put in sacks, should be carefully sorted, according to the grades of foreign manufacturers. His directions on this point, are not however, sufficiently minute to enable the wool-grower here to fully understand what should be the character of the different sorts. He says—"The broad-cloth makers in the west of England—the worsted combers of Yorkshire—the flannel manufacturers of Rochdale—and those who make hosiery in Nottingham—purchase in their several markets, a supply suitable only for their own machinery. So nice does this discrimination run, that the fleeces of fine wool taken from the sheep one year old, which were never before shorn, are mostly sent to one part of the country and there sold to be used for one purpose, and the fleeces taken from the same sheep the next season, are taken to another part of the country, and there wrought into a very different kind of goods."

In filling the sacks, Mr. Gay observes that the wool should never be pressed by machinery, but carefully packed by a man inside, and the fleeces of weak staple rejected and packed by themselves.

Mr. Morrell, in the "*American Shepherd*," gives particular directions in regard to preparing wool for market. He recommends that the fleeces, as fast as they are taken from the sheep, should be spread on a table, the outside uppermost. The fleece is then carefully spread out, the ragged portions from the neck, head, and skirts separated, and the fleece then made as compact as possible, by pushing the sides towards the centre. "The loose wool is then thrown upon the fleece, which is followed by turning over the sides and ends so as to form an oblong stripe, say about two to three feet long, and one and a half wide, which moved to the front edge of the table. He then commences to roll the long stripe, aided by a boy at the other end of it, who lay their arms flat from the elbow to press the wool as the rolling proceeds, till the stripe is reduced to six or nine inches in width, depending on the size of the fleece. The boy then mounts upon the table, and each commences rolling from the ends of the stripe till the parts meet, when the boy rolls his portion on the top of assistant's, firmly pressing it till the twine is passed round both ways and tied, which effectually secures the fleece, no matter how roughly handled. After it receives a slight pressure, it presents somewhat the form of a cheese." He earnestly enjoins that the fleeces should be thoroughly cleansed, and nothing put within them but "*clean things.*"

ANSWERS TO INQUIRIES

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Grafting Large Apple Trees.—"Agricola," (Enfield, Ct.) J. J. Thomas, in the *Fruit Culturist*, says, that when it becomes an object to change the tops of large trees by grafting, it is best, "instead of cutting off the large branches and grafting them at once, to prune the top in part, which will cause an emission of vigorous shoots. These are then budded or grafted with ease and success; and as the grafts gradually extend by growth, the remainder of the top may, by successive excisions, be entirely removed." He recommends, however, that trees "which are old, crooked, stunted, or diseased, should be rejected at once."

Low Blackberry Bushes.—"Agricola." The low, or running blackberry, is a very difficult plant to eradicate. Its roots, which are very numerous, possess the power of sending out sprouts, which become tops, from almost every part, and plowing or cutting seems only to multiply them. The best mode of destroying them which we have ever known, is pasturing closely with sheep. The sheep, if kept short, will bite off the briers as soon as they appear above ground, and this course, if continued two or three seasons, will destroy a large portion of them.

Corn Sheller.—L. E., (Naperville, Ill.) We think Clinton's sheller would answer your requisitions. It will fit ears of any size, and will shell the corn perfectly clean from the cob. It is made both single and double. The single medium will shell one hundred and fifty bushels per day, having one man to turn and one to feed. The double one requires two men to feed it, to work to advantage, and is capable of shelling two hundred to two hundred and fifty bushels per day. It may have too cranks attached to it, or it may be easily fitted for horse-power. It is strong and durable, and not likely to get out of order. The price of single machines is $10, and of the double one, $13. They are for sale at the Albany Ag. Warehouse.

Gooseberries.—H. P., (Clifton Park, Saratoga Co., N. Y.) Downing, in his *Fruits and Fruit Trees of America*, says all that is necessary to prevent mildew, is—"1st, to root up and destroy all inferior kinds subject to mildew; 2d, to procure from any of the nurseries some of the best and hardiest Lancashire varieties; 3d, to keep them well manured, and very thoroughly pruned every year." A writer in the April number of the Horticulturist, states that his remedy against mildew in this fruit, is salt hay from the marshes, spread around the bushes to the depth of three inches. It is suggested that common coarse hay, soaked in brine might do as well. For further particulars in regard to the best mode of cultivating the gooseberry, we refer to the article above mentioned.

Ashes, Salt, and Plaster.—A Young Farmer, (New Britain, Ct.) We cannot cite any experiments in answer to your question; but would recommend that you try ashes, salt, and plaster, in the following manner: 1. Apply the three substances mentioned, in the same way and at the same time, *separately*, to three rows of corn of equal length, giving an *equal value* of each substance to each row; next to these three rows, leave one row to which nothing shall be applied. 2. Mix together the *same value of ashes and salt* as in the first case was applied separately to two rows, and apply this mixture to two other rows; to the next row apply plaster as in the first case, and leave the fourth row without anything. 3. Mix together the *same value of ashes, salt, and plaster*, as in the first case was applied to three separate rows, and apply this mixture equally to three rows. 4. Apply a mixture of *salt and plaster* to two rows, as was specified for the other cases. Go through a fourth or half an acre in this way, in alternation, in order that each division of rows may have an equal chance in regard to soil, &c At harvest, carefully weigh the product of each row or division, both stalk and grain; note the result, *and report to us.*

Locust Seed.—"A Subscriber," (Ballston Spa., N. Y.) Locust may be sown in spring as well as fall, but to insure their quickly vegetating, hot water should be poured on the seeds, and they should remain immersed for five to ten minutes. This will soften the hard skins, and if planted immediately, they will vegetate in a few days. We cannot say what quantity of seed would be requisite for an acre. In our practice of raising locust trees, the seed was sown in beds, and the plants transplanted the next season to the places where it was wished to have them grow. The yellow locust is considered preferable for timber. It is for sale by Mr. Thorburn, of this city, at $1.50 per pound. Carrots may be grown to advantage on a clover ley, with rich loamy soil, such as you describe.

Ashes, Rotten Wood, Bones, &c.—1. Does the decay of woody substances, (brush, small branches, &c.,) by rotting on or in the soil, furnish alkali, and benefit land equally, or to a greater extent than if the same had been converted into ashes? *a.*

2. Will bones require to be broken small before the application of sulphuric acid, and what is the best and most economical mode of performing the process of pulverization, and what quantity is required per acre? *b.*

3. Is the fertilizing property of bones injured; and if so, to what extent, by calcination, and how, and in what quantities, should they be applied when burnt? *c.*

4. What is the best way of preserving cabbages through the winter in large quantities, *fresh* and *green*, as I sometimes see them? *d.* P.

a. More alkali would be formed by burning the woody substances, and if the soil was sufficiently light, perhaps greater benefit would be derived by applying the ashes; but if it was a compact, tenacious soil, the greatest benefit would probably be derived from the unburnt vegetable matter, because its greater bulk would tend to render the soil more friable.

b. The advantage of breaking bones before applying sulphuric acid to them, is that they would dissolve sooner than if used whole; but the breaking does not appear to be indispensable. They should be frequently stirred to accelerate the action of the acid. The quantity applied per acre, varies from eight to twenty-five bushels [See Feb. No., p. 53.]

c. By burning, the *gelatine* of bones, which is an excellent manure, is dissipated, and only *bone-earth*, or phosphate of lime remains; but the *exact* difference in the value of burned and unburned bones, we do not know.

d. We must leave this question to those who have had experience in the business.

Proper Construction of Lightning Rods.—Several inquiries have been received in reference to the best means of securing buildings against injury by lightning. There is no doubt that iron rods properly made and attached to the buildings, are a great if not certain protection against this subtle fluid. The great principles to be observed in the construction and erection of lightning rods are, that the connection of the rod should be complete and perfect throughout its whole length; that it should be attached by non-conducting substances; that the rod should be protected against rust, at the points, which should be plated with some metal, such as silver or platina, which will not corrode by exposure to the atmosphere; that the lower end of the rod should be always surrounded by moisture.

The following observations in relation to this subject were written some years since by Professor Olmstead, of Yale College, and published in *Silliman's Journal*.

1. The rod should be closely joined together throughout, either by securing one part within another, or by

welding several parts together; this will prevent the interruption occasioned to the passage of electricity through links or loose joints. [In some instances we have heard of the parts of the rods being so made that one would screw into the other, making the connection more perfect than it otherwise could be.—EDS.]

2. The points of the rod above should be *gilt*, since the conducting power of iron is impaired by oxidation.

3. The rod should descend into the ground far enough to be always in contact with moist earth. This depth will vary in different places. In some places five feet will be sufficient; in others six or seven will be required; and in soils particularly dry, it may be prudent in the season of thunder-storms, to connect the bottom of the rod (by means of a chain or the rod continued,) with a well or vein of water. The chain or rod may be inclosed in some substance, or be painted with a thick coat of lamp-black to keep it from from rusting. When the bottom of the rod terminates in the ground, it may branch off in several directions.

4. The height of the rod above the building should be regulated on this principle; that *a lightning rod will protect a space in every direction from it, of twice its length above the building.*

5. The rod should be fastened to the house by wooden in preference to iron stays; for though electricity takes the shortest route, yet in case the rod were imperfect, the passage of the fluid into the building would be favored by iron bolts. [We have seen blocks of wood used for fastening the rods to the building; in some instances, thimbles or cylinders of glass, or horn, have been inserted in the blocks for the rods to pass through. It is argued that, as the glass and horn are non-conductors of electricity, the fluid is not liable to be led into the building at the points where the rods are attached, but by leaving the rod insolated, allows the electricity to pass downward without interruption.—EDS.]

6. The kitchen chimney, being that alone in which a fire is usually kept during the summer, requires to be especially protected.

7. Paint made of lamp-black is best suited to lightning rods, this substance being a better conductor than other kinds of paint.

In addition to the remarks of Prof. OLMSTEAD, it may be proper to call attention to some essential particulars. It should be remembered that the attractive power of the rod only extends through a certain space, which, according to Prof. O.'s calculations, is twice the length which the rod projects above the building. A sufficient number of rods must therefore be provided to protect the whole surface of the building.

Practical electricians state that during thunder storms, there are three different discharges of lightning; "from the earth to the clouds; from the clouds to the earth; and through the atmosphere from one cloud to another." The latter discharges are said to be more frequent than any others, and often take the earth in their course. They were formerly called "rebounding strokes of lightning."

"To meet these various discharges of lightning," says an anonymous writer in the *New England Farmer*, "we must have conductors armed at all parts; that is, they should present in all directions, an attracting influence, by which the electric fluid may be discharged gradually and silently, without an explosion. The explosion prevented, all harm is prevented. This attracting or receiving power, as it is more properly termed, depends on the points; hence the greater the number of points and sharp and rough corners, the greater the protecting power. Conductors should not only be armed with these numerous points, and should be pointed to the ground, but they should be placed on st exposed parts of the building." If these rules are correct, and they certainly correspond with our observation, it follows that square rods, with jagged corners, presenting numerous points, will afford to a building much more protection than round rods.

NOTICES OF NEW PUBLICATIONS.

GRAHAM'S AMERICAN MONTHLY MAGAZINE; GEORGE GRAHAM, editor: published by G. R. GRAHAM & Co., Philadelphia.

We have received the May number of this beautiful literary work. The embellishments consist of a spirited and elegant picture illustrating a dance of Mandan women; a picture of the "Lover's Leap," on the Chattahoochee river, Georgia; and a "Colored Flower"—the latter exceedingly beautiful, and in a style different from anything we have before seen. The contents embrace several well-written articles by J. FENNIMORE COOPER, W. H. C. HOSMER, S. D. PHELPS, and others. The terms of this work are three dollars a year in advance.

TRANSACTIONS OF RENSSELEAER COUNTY AGRICULTURAL SOCIETY for the year 1846.

We are indebted to GEORGE VAIL, Esq., for a copy of the above pamphlet, which embraces 106 pages of interesting matter in reference to the operations of this Society for the past year, including the able addresses of GOULD & VAIL—the former delivered at the last show of the Society, and the latter at the last annual meeting in February. This Society is constantly gaining friends and influence, and few associations are doing more than this for the advancement of the public good.

THE AMERICAN JOURNAL OF INSANITY, edited by the officers of the New-York State Lunatic Asylum, Utica.

The present is the third volume of this valuable publication, which we hope is extensively read, as it is calculated to be very beneficial by giving information in regard to the proper modes of treating insanity. It is published quarterly at one dollar per annum.

A BOOK FOR EVERY FARMER: The American Veterinarian, or Diseases of Domestic Animals, showing the Causes, Symptoms, and Remedies, and Rules for Restoring and Preserving Health; with directions for Breeding and Training; by S. W. COLE, editor of the Agricultural Department of the *Boston Cultivator*, &c., Boston. JOHN P. JEWETT & Co.

This will be found a useful book. It has one advantage over any other of the kind which has appeared here, that is, it speaks of diseases under the names by which they are known in this country, and the remedies prescribed are generally within the reach of every farmer, and may frequently be had on his own farm. This is quite a convenience, to say nothing of the saving in a pecuniary view. We recommend the work, and second the suggestion that it should be in the possession not only of farmers, but of every one who keeps a "horse, cow, sheep, pig, dog, or a few fowls." A few copies have been left for sale at our office, at *fifty cents* each It is very neatly printed, and well bound.

THE ENGLISH SPELLING BOOK: designed to teach Orthography and Orthoepy, with a critical Analysis of the Language, and a Classification of its Elements on a new plan; with appropriate Lessons for the Instruction and Improvement of the Young: by the American Society for the Diffusion of Useful Knowledge. New-York. LEAVITT, TROW & Co.

This book appears to be the first of a series, which it is designed to publish, under the direction of the Executive Committee of the American Society for the Diffusion of Useful Knowledge. From a brief examination of it, we are inclined to think it is well calculated for its object. We think the analysis and classification of language will be found very useful.

PORK BUSINESS IN CINCINNATI.—Over 3000 hogs were cut and packed by a single pork house in Cincinnati, in three consecutive days, the past winter.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received during the last month, from Solon Ramsdell, One of your Subscribers, Wm. R. Prince, Wm. A. Wolcott, A Subscriber, Plowboy, Caius, Z. C. Robbins, J. W. H., A Young Farmer, S. W. Jewett, D. G. W., Agricola, H. Palmer, D. T., A Subscriber, David Thomas, I. A. H., Wm. Wallis, J. D. Jones, J. D., A Bee Keeper, Queens County, F. K. Phenix, Charles Steane, Spalding, T. C. Peters, H. D. R., W. H. Hayward, D. S. Howard.

Books, Pamphlets, &c. have been received as follows:—History of Wyoming, by **Charles Minor**, an elegantly bound copy, from some unknown friend.——Transactions of Rensselaer Co. Ag. Society for 1846, from **Geo. Vail**, Esq.——A pint of Osage Orange seed, from Messrs. **Ely & Campbell**, Cincinnati.——Parts V and VI of Dombey & Son, illustrated edition of **Lea & Blanchard**, Philadelphia, from the publishers.——Abstract from the Returns of the Agricultural Societies in Massachusetts, from **Wm. Bacon**, Esq.——Prize List of the Windsor Co. (Vt.) Ag. Society.

We tender our thanks to Mr. **Colman**, for three beautiful volumes which he has just sent us from London, entitled, I. The Cultivation of Flax; the Fattening of Cattle with native produce; Barn-feeding and Summer-grazing, by John Warnes, Esq. II. A Series of Letters on Agricultural Improvement, by John J. Mechi. III. Practical Farming and Grazing, with observations on the breeding and feeding of sheep and cattle, &c., by C. Hillyard, Esq.

☞ We have received from **Wm. Stickney**, Esq., of Boston, a ham from one of his Suffolk pigs, cured after the mode mentioned in our February number, page 59. It is our opinion, as well as that of some of our friends of *taste*, that the ham is a very fine one; but though we would institute no *invidious* comparison, we are of the opinion that the excellence is more owing to the *breed of pigs* than to the mode of curing.

Egyptian Corn.—We have received from **Cyrus Ingalls**, Esq., of New Hartford, Oneida county, N. Y., a sample of this kind of grain. A variety quite similar to this has been cultivated in this county, chiefly as a curiosity, for several years. It is of the same family as broom corn, producing its seed in a similar manner. We are not aware that it has any particular qualities which would render its cultivation profitable.

Osage Orange.—We are pleased to learn that Mr. **Thorburn** of this city has received a quantity of the seed of the Osage Orange. It comes direct from its native country, the banks of Red River in Texas. It is highly recommended as a hedge plant, and for this purpose is considerably cultivated in some of the south-western States. We have seen some fine hedges of it in the neighborhood of Cincinnati and other parts of southern Ohio. How it may stand the winters of this latitude we are unable to say, but deem it well worth a trial, being confident that it will answer admirably if it should prove sufficiently hardy. From a communication in reference to the cultivation of this plant, published in the *Cincinnati Gazette*, we extract the following:—

"The best way to start a hedge of this plant, is to procure some of the seeds, of which about 7,000 are comprised in a quart. Scald them in water near the boiling point, and plant them in nursery beds, in good soil, and keep down the weeds the first year. In transplanting, the plants should be set about 12 inches apart. These facts will enable any person to form a correct judgment of the number necessary to plant in any given length of hedge. The seed should be sown early in the spring, and if not preferred to sow as above in a nursery bed, to be afterwards transplanted, it may be sown where the fence is wanted, by preparing the ground, and using a garden line to get the fence straight, covering the seed lightly with fine earth. When the plants are up, they must be kept clean and well hoed; and in the fall they should be headed down to within two or three inches of the ground."

The price of the seed is $3.50 per quart. A quart is said to contain from 7,000 to 8,000 seeds. It is for sale by Mr. **Thorburn**, corner of Broadway and Maiden Lane.

Address at the State Fair.—It will be seen by reference to the doings of the Executive Committee, published in this number, that the Hon. **Silas Wright** has consented to deliver the address at Saratoga, on the occasion of the Fair.

New Horticultural Work.—It will be seen by a notice in this paper, that the Massachusetts Horticultural Society is about to commence the publication of its **Transactions**. The work will be issued in Parts, as the materials accumulate; and each Part will contain from **four to six Plates**, chiefly of **Fruits**, but occasionally of **Flowers**, drawn and colored from nature, by the best talent the country can produce. It will contain accurate descriptions of the Fruits and Flowers, of which plates are given, original papers from the regular and corresponding members of the Society, its proceedings, &c., &c. From the talent, good taste and energy embodied in this Society, we confidently anticipate a work of great practical value, in a most tasteful dress.

Rensselaer Institute.—By reference to an advertisement in this number, it will be seen that the summer term will commence on the 5th of the present month. We believe this to be one of the most useful institutions in the country, and cordially recommend it to those who wish their sons to pursue a course of studies which is particularly calculated to the adaptation of the sciences to agriculture and the arts. A more detailed notice of the system of instruction pursued here, will appear next month. In the meantime parents wishing to place their sons in an institution like this, can address Prof. B. F. **Greene**, Renselaer Institute, Troy, N. Y., who will furnish them with all the information necessary to enable them to judge correctly as to the merits of the institution.

Fine Fowls.—We have received from Mr. **Adrian Cornell**, of Newtown, Bucks county, Pa., a cock and two hens of the "Bucks county breed," so called, and a cock and two hens of a stock imported from China. The latter are beautiful birds—of large size, with small, neat heads, clean, flat legs, and almost perfect symmetry of body, with a fine glossy black plumage. They are chickens of last season, and though in only middling condition, the cock weighed on the scales here, eight and a quarter pounds. The hens were not weighed. We think we have never seen any other fowls of so large a size, which were in all respects so fine in appearance as these. We do not mean to say that *all* Chinese hens are of this character, for Mr. **Cornell** observes—"I have seen some China fowls which were quite different from those I send you, being coarse-boned, with long legs, long neck, large head, with a short and disproportionately small body; but such as I send you, I consider the best for beauty and the table of any kind I have ever been able to obtain."

The "Bucks county fowls" are large—the cock, about nine months old, weighed eight and a half pounds. They are of a dull yellowish color, and their leading characteristics indicate that they belong to the tribe of Malays. We have no doubt, however, that they are of the *true* kind which has obtained such celebrity as the "Bucks county breed." Mr. C. says of them—"they have been in my possession, and in possession of my father before me, for the last forty years, and have been bred with great care as regards their qualities for the market and table. There have been fowls sold over the country for Bucks county fowls, which were a mongrel breed, a cross of the African and common, and of different kinds bred together. Such fowls cannot be relied on. Those I send you have been kept pure, having been bred on this farm for the long period I have mentioned."

☞We would call attention to the advertisement of MORSE's horse, in this number. A cut and description of him was given in our May number of last year, and some notice of his stock appeared in the November number. Five of the progeny of this horse were shown in this city not long since, and attracted much attention on account of their fine forms and good action. We are informed that a young stallion of this stock has lately been purchased by Messrs. NOTTINGHAM & Co., near Palmyra, N. Y., for $800.

GREEN CROPS AS MANURE.—The Report on Manures, made to the New Castle County Agricultural Society, Del., states that William Polk, of Cantwell's Bridge, increased his corn crop ten bushels per acre, by turning in the second crop clover, over other parts of the field which was mowed for the purpose of obtaining seed.

VALUE OF MANURE.—The same Report also states, that "the late George Simmons, five miles from Wilmington, improved one of his fields by drawing manure from the city, which cost him, delivered, three dollars per cart load, and spread it at the rate of twenty loads to the acre, making sixty dollars for the manure, which was more per acre than his farm would have sold for, yet the increase in the crops justified the expense." A young farmer 6 miles from Philadelphia, informed the writer that manure from the city, costing three dollars per load and one dollar for drawing, or four in all, was a very profitable application; and that he yearly expended six hundred dollars in this way.

IMPROVEMENT IN LUMBER WAGONS.—In the second number, current volume, of the Cultivator, a brief account is given of an improvement in lumber wagons, which has been adopted to some extent in England. That account was merely intended to exhibit the *principle* of the improvement, without at all entering into the details of construction.

Since its appearance, several correspondents have inquired the mode of support for the forward end of the box; and some have summarily censured the mode of construction, in the absence of the required information. The Ohio Cultivator, which copied the article, also states that several similar inquiries have been made.*

The rough figure which was given of this improvement, was incorrect, and has in part, led to an erroneous impression. The joint in the reach, was represented as too far behind the forward axle. The distance should not be more than twelve or fifteen inches, which is sufficient to allow all the necessary advantage to this mode. A heavy metalic plate,in the form of the arc of a circle, and a few inches wide, is fixed to the middle of the axle, so that the centre of the arc is the turning point in the reach. A similar and corresponding plate is fixed in connexion with the box above. All the friction which occurs, is between the polished faces of these two metalic plates. An iron pin passes through the bottom of the box and the turning point of the reach, and preserves the box in its place, the bottom and sides of the box being fastened together. It will be observed that by this mode, the surface exposed to friction, is but little greater than in the usual plates on the axle and bolster in the common way; and that in ordinary forward motion, the movement from one side to the other is exceedingly small.

A Vermont correspondent states that wagons were made in this way in his neighborhood, twenty years ago, and failed; and he asserts that the friction between box and axle would wear out the box in two weeks, and the axle in four. It would have been interesting to know by what mode the box was supported, in the cases he describes. By the mode already stated, wagons holding from *four to five tons*, have been used in England, without any difficulty.

It is not impossible that an advantage might result by substituting two strong metalic rollers in place of the upper plate, though hitherto it has not been found necessary.

The correspondent who objects, that as "in turning, the wheels move sideways, which would be impossible, unless the ground was perfectly smooth and hard," [to admit their *sliding*,] is informed that the wheels turn precisely as the wheels of any other wagon without altering their position on the ground, while the box itself moves in a contrary direction, by means of a pin through the turning-point. T.

RED CEDAR FOR HEDGES.—We have sometimes seen in gardens and ornamental grounds, very fine screens of red cedar, and it has occurred to us that this plant might be used to good advantage for forming hedges for sheep, especially in sections which are destitute of wood and timber. Some beautiful specimens of this kind of hedge or screen or may be seen in the garden of Mr. JAMES WILSON, near this city. The form is conical and perfectly regular, the sides even, and the branches so close it would be almost impossible for a rabbit or a partridge to pass through it. Nothing can be more agreeable to the eye, than well-set and regular line of fences of this description; and we have no doubt that they would form an effectual barrier against sheep, and perhaps against cattle also, when they shall have acquired sufficient age.

We learn from Mr. Wilson, that the proper mode of cultivating the red cedar is as follows:

The seed should be gathered in the fall, as late in the season as possible, and may be at once sown to the depth of an inch on a bed of light loam, in which has been mixed a dressing of peat. But few plants only will come up the first year, but the bed should be kept clean by skim-hoing with a scuffle or dutch hoe; and in the fall, the beds should be well cleaned off, saving what plants have come up, and apply a dress of sandy compost, a fourth of an inch thick. The plants will come well the second year.

When the plants are from one to two years old, transplant them in May, in rows one foot apart, and eight inches in the row. Let them stand in these rows one or two years, as may be convenient; but whenever planted out for hedges, it should not be done earlier in the season than May. They may be set twenty inches apart, in ground prepared as for corn. They should be kept clear of weeds and grass; and for the first two or three years, they should be topped so as to keep them of uniform height. In four or five years, they will grow to the height of five feet.

A sandy or gravely soil appears to suit the red cedar best, but it grows well in Mr. Wilson's soil, which is a tenacious clay. We presume it would flourish on the *dry* western prairies.

SAVING OF ANIMAL FOOD BY RAILROADS.—Every one knows that in driving fat animals, there is a considerable loss of weight. Mr. COLMAN, in his Fourth Report on the Agriculture of Massachusetts, states—the loss in driving fat cattle from Connecticut river to Brighton, (say 100 miles,) at from 50 to 100 pounds to each animal. We notice a statement in a late English periodical, in which the average loss for the same distance, is put down at 40 pounds each for fat cattle, 8 pounds for sheep, and 20 pounds for hogs. To give some idea of the aggregate loss which has thus been annually sustained, and the saving effected by transporting stock on railroads, it is computed that the number of animals annually transported by this mode of conveyance in England, is 220,000 cattle, 1,250,000 sheep, 550,000 swine. According to the above estimates, this would give a total of 27,050,000 pounds, 11,000 tons food saved by railroad transportation; which amount was formerly lost yearly, by driving the animals to market. The saving may ultimately be as great in this country, when our railroad communications become sufficiently extended. It is computed that there are at the present time, 4 500 miles of railroad in the United States, 700 miles of which are in the state of Massachusetts; 500 miles are short roads to coal mines, quarries, &c. But there are, as is estimated, 10,000 miles of railroad in the United States, projected, and not completed.

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* The "plan was [*not*] *copied* from an English work," as that paper states, but derived from a verbal source of the highest credit.

THE MARKETS.

The Cambria arrived at Boston on the evening of the 20th, with London dates to the 3d April. She brings news of a rise in Cotton equal to nearly half a cent per lb. on American varieties of all kinds. The large importation of Bread-stuffs into Great Britain and Ireland, have had the effect of lowering the prices of grain and flour. At the present date, (April 22d,) the effect of the news on our markets is not sufficiently ascertained to justify quotations.

SEED DRILL AND CORN PLANTER.

IN the April number of the Cultivator was published a description and cut of the Albany Seed Planter. I would invite the attention to, and trial of the same by Farmers and Gardners, and particularly those who cultivate Root crops, as Carrots, Parsnips, Beets, Turnips, &c., inasmuch as this insures a certain and *continual* dropping of the seed. It also has a stop motion, by which the operation ceases by a touch of the hand or foot. This Planter with the Cylinder is a desirable labor saving machine both for sowing and after culture, and with Cylinder for large seeds, should be in the possession of every farmer. For sale at the Ag. Warehouse and Seed Ssore of Luther Tucker. H. L. EMERY.

PLOWS! PLOWS!!

THE attention of Farmers and Dealers is particularly invited to our assortment of Farming Tools—among which may be found a complete assortment of the most approved as well as common plows, including all sizes of the Center Draft, Side-Hill, Subsoil, Self-Sharpening Plows, from Messrs. Prouty & Mears, of Boston. Also, the Eagle, Subsoil, Side-Hill, Self-Sharpening, and others, from Messrs. Ruggles, Nourse & Mason, of Worcester, Mass. Also, the Peekskill Plow, all sizes, from Minor & Horton, of Peekskill, N. Y., and Delano's Diamond Plow—all for sale at the manufacturers' home prices, and warranted. The adjustable Steel Point Self-Sharpening Plows, from the factory of Messrs. Ruggles, Nourse & Mason, is just received. This is a new improvement in the wearing parts of the plow, and has several advantages over the common plows in use. (See R. & N.'s advertisement.) Also on hand Cultivators, Harrows, Seed-Sowers, and Planters, Ox-Shovels or Scrapers, Field Rollers, &c., &c., &c., at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany, N. Y. L. TUCKER.

POUDDRETTE.

THE Lodi Manufacturing Company offer their Poudrette for sale the following season at *reduced* prices, viz: In barrels delivered free of cartage, at any wharf or place in the city of New-York, at the rate of $1.50 per barrel, for any quantity over 7 bbls.; (under 7 bbls., $1 75.) In *bulk*, at the factory, on the Hackensack river, where vessels drawing 8 feet of water can come, it will be delivered at the rate of 25 cents per bushel. Planting 4 feet apart, each way, 2 barrels or 8 bushels of Poudrette will effectually manure an acre of corn, and will vie in cheapness and efficiency with any manure now in use.

Apply by letter *post-paid*, to the "LODI MANUFACTURING CO.," New-York, or to James B. Cox, Agent, No. 90 West-st.

April 1—3t.

GUANO.

200 TONS Ichaboe Guano, balance ship Shakspeare's cargo, the best ever imported in the country, for sale in lots to suit purchasers, by E. K. COLLINS, 56 South-st.

April 1.—tf.

AGRICULTURAL SEEDS.

THE Subscribers offer for sale their usual supply of *White Silesia French Sugar Beet* for Cattle, at 75 cents per pound.

Yellow German Beet for Cattle, a very superior sort, being quite as productive as the White, growing quite as large, and said to contain more nutritive properties—$1 per pound.

White Field Carrot, growing very large, and producing, under proper cultivation, from 8 to 12,000 bushels per acre—$1 per lb.

Guernsey Cup Parsnips.—Best kind, $1 per lb Long Orange and Altringham Carrots for Cattle, $1.25 per lb., very clean seed.

Spring Vetches for soiling and green fooder—$4 per bushel.

Lucerne Clover, the most productive clover cultivated, may be cut two or three times each season, producing each time as much or more than the common Red Clover—25 cents per lb., 16 lbs. to the acre—sow in May.

With a general assortment of fresh Garden, Field and Flower Seeds of the best qualities, and warranted genuine.

J. M. THORBURN & Co.,
15 John st., and 465 Broadway, New York.

☞ New General Catalogue of Garden, Field and Flower Seeds, new Roses, &c., &c., for 1847, just published, and may be had on application. May 1, 1847—1t.

STOCK FOR SALE.

MATCH and single Horses, some of which can trot their mile under three minutes, others rack and gallop easily, making admirable saddle-horses for ladies and gentlemen; Durham, Devon, Hereford, and Ayrshire Cattle; Merino, Saxon, South-Down, and Leicester Sheep: the large white English breed of Swine, Berkshires, Poultry, &c., &c. Apply to

A. B. ALLEN, 187 Water-Street, New-York.

March 1, 1847—tf.

NEW-YORK AGRICULTURAL WAREHOUSE.

FARMERS, Planters, and Gardeners, will find the LARGEST and MOST COMPLETE assortment of Agricultural Implements, Field and Garden seeds, of all kinds, ever offered in this market. Most of the implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a superior finish, and offered at the lowest cash prices. A. B. ALLEN & Co., 187 Water-st., N. Y.

March 1—3t.

THE FARMER AND MECHANIC,

An Agricultural and Mechanical Journal. Also devoted to Manufactures, Science, the Arts, etc.

PUBLISHED weekly at 135 Nassau-st., Clinton Buildings, N. Y. W. H. STARR, Editor and Proprietor. The Farmer and Mechanic is designed to be a Family and Business Newspaper, devoted *particularly* to the objects above specified, and *generally* to the promotion of Temperance and Education, connected with purity of principle and sound morality.

It will contain the authentic reports of the New-York Farmer's Club, the Conversational Meetings of the American Institute, the Proceedings of the Mechanic's Institute, and other similar associations. It will also represent the interests of those engaged in the Silk Culture—for which department a gentleman of experience and qualification is engaged. Able correspondents are secured upon all other subjects, and no expense will be spared to make this periodical superior to any other similar Journal in the country.

TERMS.—This periodical is printed weekly, on good paper, embellished with numerous Engravings, containing forty-eight columns of closely printed matter, at $2 per annum in advance.

Advertisements of twelve lines or less, inserted once for 75 cents; three months. $3.50; six months, $6.00; one year, $12.00.

☞ Postmasters and others may retain 25 per cent. on all cash subscriptions they procure.

All communications must be addressed, post paid, to

W. H STARR,
May 1, 1847. 135 Nassau-st., New York

FINE PURE BRED SHEEP FOR SALE.

THE subscriber being about to give up the farming business, offers for sale his stock of Merino Sheep, consisting of 54 pure bred Merino ewes—all with lamb by the celebrated Rambouillet Buck "Grandee," owned by Rev. L. G. Bingham, of Williston, Vt. Also 50 lambs from the above-mentioned ewes, got by the Rambouillet buck "Chancellor," and the Paular "Mt. Defiance," now owned by Merrill Bingham, Esq., of Cornwall, Vt. It is believed by their owner that they are fully equal to any flock o sheep in the country for raising stock. The ewes, aside from raising a lamb each, sheared last June, upon an average, 4 lbs. 4 oz. of well washed wool—perfectly clear from gum. The wool was sent to Samuel Lawrence, Esq., of Lowell, and pronounced by him to be the right kind of wool for our farmers to raise—being the most profitable.

Satisfactory evidence of the blood can be given. Apply to the subscriber at Williston, Vt., or A. B. Allen, 187 Water-st N. Y.

Good endorsed notes on six months time will answer as well as cash down.

THOS. H. CANFIELD.

May 1—1t.

HORSE RAKES.

WILCOX'S Revolving Horse Rakes, which has taken the premiums at most of the New England Fairs, for sale at the Albany Ag. Warehouse and Seed Store—price $7 and $8.

L. TUCKER.

May 1, 1847.

RENSSELAER INSTITUTE.

THE Summer Session for 1847 of the Rensselaer Institute, will be opened on Wednesday the 5th of May proximo. For information in regard to the course of study, terms of instruction, and other particulars, inquiries may be addressed to the Director of the Institute, Prof. B. FRANKLIN GREENE, Troy, N. Y., by whom pamphlets will be furnished containing a detailed view of the course of study and all other necessary information.

Rensselaer Institute, Troy, N. Y., April 15, 1847—2t.

AGENCY FOR PATENTS,

Washington, D. C.

ZENAS C. ROBBINS, Mechanical Engineer, and Agent for procuring Patents, will prepare the necessary drawings and papers for applicants for Patents, and transact all other business in the line of his profession at the Patent Office. He can be consulted on all questions relating to the Patent laws, and decisions in the United States or Europe. Persons at a distance, desirous of having examinations made at the Patent Office, prior to making application for a patent, may forward, (post-paid, enclosing a fee of five dollars,) a clear statement of their case, when immediate attention will be given to it, and all the information that could be obtained by a visit of the applicant in person, promptly communicated.

All letters on business *must be* post paid, and contain a suitable fee, where a written opinion is required.

Office on F. street, opposite the Patent Office.

He has the honor of referring, by permission, to
- Hon. Edmund Burke, Commissioner of Patents;
- Hon. H. L. Ellsworth, late " "
- H. Knowles, Machinest, Patent Office;
- Judge Cranch, Washington, D. C.;
- Hon. R. Choate, Massachusetts, U. S. Senate;
- Hon. W. Allen, Ohio;
- Hon. J. B. Bowlin, M. C., Missouri;
- Hon. Willis Hall, New-York;
- Hon. Robert Smith, M. C., Illinois;
- Hon. S. Breese U. S. Senate;
- Hon. J. H. Relfe, M. C., Missouri;
- Capt. H. M. Shreeve, Missouri.

May 1, 1847—3t.

TRANSACTIONS OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.

HORTICULTURAL HALL, School-Street,
Boston, March 25, 1847.

THE Massachusetts Horticultural Society announce to the public, that its Committee of Publication is preparing to publish the first number of a series of Transactions of the Society.

This publication has been for some years in contemplation, and materials have been collected for this purpse; but it has been hitherto delayed until the funds of the Society should enable it to be produced in a style of excellence which could not fail to render it both permanent, and an honor to the advanced state of the Horticulture of the present day.

It is intended that the work shall be in *royal octavo*, and the numbers shall appear as frequently as materials accumulate; each shall contain from FOUR TO SIX PLATES, chiefly of FRUITS, but occasionally of Flowers, drawn and colored from nature, by the best talent the country can produce, and also the proceedings of the Society, including the reports of the weekly and annual exhibitions, to the date of publication.

The Society hopes soon to offer such premiums for able communications on Horticultural subjects, as shall secure to these Transactions papers containing information of great practical value to all interested in this pursuit.

Although the authors of papers will alone be generally responsible for their contents, yet all accounts and descriptions of Fruits will be published under the immediate supervision of the Fruit Committee, and of Flowers under that of the Flower Committee; so that the *authenticity of the Society* will be attached to the most essential portions of their Transactions.

To establish a standard for all the present varieties of fruit, and to enable the public to judge of the quality of new kinds, as they shall be presented from imported trees, or from varieties originating in this country, will be one of the principle purposes of these Transactions, and will receive the particular attention, not only of the Committees of the Society, but also of the most experienced of its individual members.

The price, to the members of the Society, will be about the cost of plates, printing, &c., and will not exceed seventy-five cents per number; to others, the charge will be one dollar.

All communications intended for publication, may be addressed to J. E. TESCHEMACHER, Esq., Corresponding Secretary of the Society, Boston.

Orders and subscriptions for these Transactions, may be addressed to W. D. TICKNOR & Co., publishers, corner of Washington and School-streets, Boston.

Committee of publication,
J. E. TESCHEMACHER,
C. K. DILLAWAY,
EBEN'R WIGHT,
SAMUEL WALKER,
JOSEPH BRECK,
AARON D. WILLIAMS, Jr.
E. C. R. WALKER.

May 1—1t.

BOX FOR EDGINGS.

ONE Thousand yards Box Edgings, for sale at a low rate. Apply at the Agricultural Warehouse, No 10 Green-st, Albany.

March 1—2t. LUTHER TUCKER.

A VALUABLE FARM FOR SALE.

THE subscriber offers for sale a valuable farm, situated one mile east of the beautiful village of Skaneateles, in the county of Onondaga, on the old Seneca turnpike road, leading from Auburn to Onondaga Hollow, containing 157 acres of land. There is on said farm a good dwelling-house, two large barns, sheds, and other convenient out-buildings. It is well watered, soil of the first quality, pleasantly located, and is one of the most desirable situations in western New-York. Enquire of the subscriber on the premises. CHESTER MOSES.

Skaneateles, May 1, 1847—1t*

VERMONT AGAINST THE WORLD.

WE, the undersigned, owners of the horse "Black Hawk," do hereby offer to exhibit said Stallion at Saratoga Springs, during the show of the New-York State Agricultural Society in September next, against any entire horse that may be produced on the following conditions:—Five Judges shall be selected, two by the accepting party and two by us, and these four shall have the power to select the fifth We will place $500 in the hands of the Treasurer of the New-York State Agricultural Society, on or before the first day of September next; and whoever accepts this offer and enters into the competition, shall do the same, and also give notice of their acceptance through the "Cultivator," and any other periodical they see fit, in the month of June next. The Judges shall give the award of $1,000 to the horse Black Hawk, unless another animal entered shall, in the opinion of said Judges, or a majority of them, excel him in comparative merits on all of the four following points, viz: 1st. Perfectness of symmetry; 2d Ease and elegance of action; 3d. The best and most perfect broke in harness; 4th. The fastest trotting in harness The place, time and the length of the trotting course to be determined by us, near the show ground during the fair—the distance to be not less than three nor over ten miles, as Black Hawk will not at that time be fitted and in proper condition for trotting. In case we are beaten, we reserve the right to put him in train and make a second match, to which each party shall add $100 more to the premium fund. The second match to come off within six weeks at the same place. Should there be more than one horse entered to compete with Black Hawk, the winning party shall be entitled to the whole fund.

D. E. & N. H. HILL.

Bridport, Vt., April 6—1t.

A BOOK FOR EVERY FARMER.

JOHN P. JEWETT & Co., 23 Cornhill, Boston.

HAVE just published one of the most valuable works for farmers ever issued from the American press, entitled

THE AMERICAN VETERINARIAN, or DISEASES OF DOMESTIC ANIMALS,

showing the causes, symptoms, and remedies, and rules for restoring and preserving health by good management, with directions for training and breeding. By S. W. Cole, editor Agricultural department Boston Cultivator.

Mr. Cole has spent several years in compiling and testing the facts he now offers to the farmers of this country. He has produced a work of great value to every man who keeps but a single horse or cow, but to the practical farmer its value can hardly be over estimated. The whole subject of the *Treatment of Domestic Animals*, is treated in the most thorough manner, comprising the Horse, Ox, Cow, Sheep, Hogs, Dogs, Hens, Turkeys, Geese, Ducks, Birds, Bees, &c., &c. The whole is compressed into one volume of 288 closely printed pages, with 7 beautiful wood engravings, firmly bound in leather. To be sold at the low price of 50 cts., in order to bring it within the means of every man. No pains or expense have been spared on the part of the author or the publishers, to produce a work worthy a place in every Farmer's library.

For sale at the office of "THE CULTIVATOR," and at the principal Book and Agricultural Stores in the country.

JOHN P. JEWETT & Co.

ALBANY SEED STORE.

FRESH GARDEN SEEDS,

THE growth of 1846. The subscriber begs to inform his friends and customers that he is now daily receiving his fresh Garden and Flower Seeds, and has now in store a general assortment, from the most reliable sources, both foreign and domestic. Among the more important, and for the first sowings in hot beds, he would name —Early York, Sugarloaf, and Battersea cabbage; Early Ox Hart, a French variety of unequalled quality, for both heading and delicacy of flavor: it comes in use immediately after the York, and is of equal delicacy; fine Early Cauliflower; Cape Broccoli; Early Prince Albert Peas: Cedo Nulli; Blue Imperial, and other renowned Garden Peas; Early Scarlet Short Top Radish; best Early Lettuces; Purple Egg Plant; Apple or Raresipe Tomato, &c.

From his long experience in the business of a Seedsman, and unequalled correspondence, both at home and abroad, he hopes to merit an increased continuance of patronage. His assortment of Field Turneps, Carrots, and beets, is not to be surpassed. And in the Flower Garden department, every variety to be found in London and Paris is regularly sent out:—the finest German Asters and Balsams, with too numerous a list of new Annuals to put in an advertisement, Gladiolus Floribunda Roots, Tiger Flowers, Double Dahlias, and many other desirable spring bulbs. Canary birds, of the finest song. Fancy Cages in great variety; fresh Canary, and other bird seeds; Glass Fountains, &c., &c. ☞ Traders supplied.

WM. THORBURN,
Corner Broadway and Maiden Lane.

April 1—2t.

☞ Also a large and fine assortment of Fruit Trees and Roses Catalogues gratis.

JOSEPH BRECK & Co.,
NEW-ENGLAND AGRICULTURAL WAREHOUSE AND SEED STORE.
Nos. 51 *and* 52 *North Market-Street, Boston.*

OFFER for sale one of the most extensive collections of VEGETABLE, AGRICULTURAL, and FLOWER SEEDS, to be found in the country, comprising a large assortment that are new and rare.

Also, every description of HORTICULTURAL and AGRICULTURAL IMPLEMENTS, and TOOLS, together with a general assortment of Agricultural and Horticultural Books.

Superb varieties of FLOWER SEEDS.—We have now a full supply of fresh flower seeds from the most celebrated Florists in Europe, from our own garden in Brighton, and from other sources, of the most select varieties ever offered in this country. Special attention has been given by the subscribers in long practice, in improving the numerous varieties of hardy flowers, which have so long been the object of their cultivation, and they feel assured that the seeds saved by themselves cannot be surpassed by any other growers in the country.

GARDEN SEEDS.

Early Peas—Cedeo Nulli, Early Warwick, Early Smiths, Early Hill, Early Frame, Bishop's Dwarf, Blue Imperial, Knight's Marrow, Marrowfats, of different sorts, 25 cents per quart. Prince Albert, 37½ cents per quart; Royal Green Marrow, very superior, and Queen of the Dwarfs, a very superior Marrowfat, not exceeding 1½ foot in height, new and very excellent, each 50 cts. per qt.

Cauliflower—Large Asiatic, and other early and late varieties.

Broccoli—Chappel's Cream, New Hardy Cape, Purple Cape, Cheltenham, Brimstone, Early White, Purple &c.

Cabbages—Warner's Incomparable, (very early) Queen, do.; Wellington, Imperial, Early Hope, Early York, and other fine sorts.

Couve Tronchucea, or Portugal Cabbage—a delicate vegetable of the Cabbage family, considered by some equal to the Cauliflower; 12½ cents per package.

German Greens—A handsome growing plant, and very desirable for "greens;" 12 cts. per package; Weeden's fine Long Frame Prize, one of the longest varieties—25 cts.; White Spine, 12½ cents; Early Synotts' Early Frame, &c.

Celery.—Bailey's Red Solid, Bailey's White do.; Seymour's White Solid, and other varieties.

Egg Plant.—Purple and White.

Endive—New Transparent Yellow, 12½ cts. Tomatoes.

Thyme, Sage, Sweet Majoram.

Melons—Nettled Cantaloupe, Black Rock, Minorca, Skillman's Fine Rock, Persian, Nutmeg, Green Citron, &c.

Also every other variety of Garden Vegetable Seed.

AGRICULTURAL SEEDS.

A general assortment of Carrot, Ruta Baga, Beets, Mangel Wurtzel, Turnep, Parsnep and other seeds for the field. Also

GRASS SEEDS.

Northern and Southern Clover, White Dutch do.; Lucerne, Herds Grass, Northern and Southern Red Top; Oat Grass, Orchard Grass, Perennial Rye Grass—wholesale and retail.

Potato Seeds, at 50c cents per package—sufficient for 2000 plants.

Fruit Trees, and Ornamental Shrubs and Plants, of every description—furnished at the lowest rates, and of the choicest varieties, at short notice. April 1, 1847—1t.

THE GENUINE MORGAN HORSE GENERAL GIFFORD.

THE horse purchased by the subscribers at the late State Fair, at Auburn, where he was exhibited, together with his sire, the Gifford Morgan," and attracted universal admiration, [see report of Committee on Foreign Stock, in Cultivator, vol. 3, page 342,] will stand the ensuing season for mares, on Mondays, Tuesdays, and Wednesdays, at the stable of Geo. A. Mason, two miles northeast of Jordan. Thurdays Fridays, and Saturdays, at Camillus.

TERMS—$10 the season. Insurance to be agreed upon. Pasturage for mares furnished by either of the subscribers at a reasonable price.

GEO. A. MASON,
D. A. MUNRO.

March 15, 1847—2t.

SENECA LAKE.

A BEAUTIFUL FARM for sale, lying on the east side of the Seneca Lake, Seneca Co., N. Y., about 7 miles south of Geneva, containing about 159 acres of the best quality of land. There is about 50 acres of excellent wood and timber land, and the arable and meadow land is of the best quality and in good condition. Lowest price $50 per acre. The one-half of the purchase money may remain on bond and mortgage for many years. Title good. The farm may be viewed at any time. Apply to RICHARD DEY, on the premises, or to JAMES R. DEY, No. 51 Liberty-st., New-York, or to JACOB C. DEY, Fulton-st., Brooklyn.

Fayette, March 1, 1847—3t.

THE OLD MORGAN GIFFORD HORSE,

SO well known in Vermont and New Hampshire as the highest blooded Morgan stallion now remaining, will be found the coming season at the subscriber's stable, in Walpole, N. H.

Terms—$15, of which $5 is to be paid at the time of service, and the remaining 10 if the mare proves in foal. Pasturing will be provided for mares from a distance, and the necessary attention given them. Accidents and escapes at the risk of the owners. A cut of this horse may be seen in the Sept. No., 1846, of the Cultivator.

FREDERICK A. WIER.

Walpole, N. H., March 9, 1847.—3t.*

JOHN MAYHER & CO.
U. STATES AGRICULTURAL WAREHOUSE,
No. 195 Front-street, (near Fulton,) New-York.
Foundry and Machine Shop 502 *and* 504 *Water-st.*

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A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

" *Beardstown, Cass Co., Ill., Jan.* 10, 1846.

THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

"A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

"Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYERS, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG,
No. 9 North Fourth-st., Philadelphia

Jan. 1, 1847.—6t

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TO WOOL GROWERS.

NUMEROUS liberal minded persons interested in the Wool business, having placed funds at our disposal for the purpose herein after mentioned, we shall, on the 1st day of October next, award and pay the following premiums, viz: Ten Golds Medals worth ten dollars each for the ten entire clips of most valuable fleeces for clothing purposes—ten Gold Medals worth ten dollars each for the ten entire clips of the most valuable fleeees for combing or worsted purposes—ten premiums of ten dollars each for the ten best conditioned entire clips of Saxony Wool—ten premiums of same amount for the ten best conditioned entire clips of Saxony grade Wool—ten premiums of same amount for the ten best conditioned entire clips of Merino Wool—ten premiums same amount for the ten best conditioned entire clips of Merino grade Wool—ten premiums of same amount for the ten best conditioned entire clips for combing fleeces. All Wool Growers throughout the United States are invited to compete for them. We would again invite the attention of Wool Growers to our remarks on the subject of preparing wool for market as published in the reports of the Wool Grower's meeting at Steubenville, Ohio, the 10th of February, 1847, also in the Ohio Cultivator, and other papers of the country.

All bales of wool designed for our care, should have the name of the owner or grower plainly written or printed on them in full, together with our address, as follows: "Perkins & Brown, Springfield, Mass."

All lots of wool intended to compete for the premiums, should reach us by the 1st of August next. Growers may receive premiums if their wool be put up and marked separately, even though the wool come through the merchant or other wool dealer. Any further contributions from Wool Growers or other public spirited persons will be expended in preparing the medals, publishing a report, and in additional premiums.

All Editors of Periodicals friendly to agricultural pursuits throughout the United States, are respectfully requested to publish.

PERKINS & BROWN.

Springfield, Mass., April 20, 1847—1t.

THE ENTIRE HORSE,

MORSE'S GREY, or "NORMAN," will stand for the present season at the stable of JAMES RICE, at Germondville, three miles north of Lansingburgh. CALVIN MORSE.

Lansingburgh, May 1, 1847—2t.

THE ROSE CULTURIST.

A VALUABLE Practical Treatise on the cultivation and management of the Rose in all its varieties, including Hybridizing, Budding, Grafting, Root Grafting, Forcing, and producing Seedling Roses, with an enumeration and description of more than 200 varieties of this beautiful flower. Embellished with numerous engravings.—Muslin Gilt. 31 cents; Mail edition 25 cents.

Published and for sale at the office of the Farmer and Mechanic, 135 Nassau street.

May 1, 1847—2t.

CORN MILLS.

THE subscribers have just received at their Agricultural Warehouse, a newly invented cast-iron mill, for grinding corn and other grain, either by hand or horse-power. It will grind from 3 to 4 bushels per hour. Price, $30.

Also the hand Corn Mill, which grinds from 1 to 1½ bushels per hour. Price $6.50.

These mills are highly economical and convenient, and every farm and plantation ought to have them. They are simple in construction, not liable to get out of repair, and are easily operated. When one set of plates is worn out, they can be replaced at a trifling cost.

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Plows of all kinds and sizes;
Harrows and Cultivators, of different kinds;
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Harvesting and Haying Tools of all kinks;
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Grant's and other Fanning Mills.

Garden Rollers, Ladies' Weeding Trowels, Grass Shears, French pattern, Border Shears, Garden Reels and Lines, Budding and Pruning Knives, Garden Rakes, Hay Knives, Transplanting Trowels, Pruning Saws, various kinds, Bark Mills, Sugar Mills, Bush and Bill Hooks, Root or Vegetable Cutters, Bull Rings, Axes and Hatchets, Patent Axe Handles, Wheelbarrows, Anti-Friction Rollers, Ship Scrapers, Spinning Wheels, Reels, Smith's Corn Sheller, Burrall's Corn Sheller, &c.

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Together with a general assortment of Field, Garden, and Flower Seeds, Seed Corn, Choice Potatoes, &c., &c.

April 1. LUTHER TUCKER.

CHEAP PLOWS.

SINGLE-Horse Plows, from $2.00 to $3.00 each;
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The woods of these plows are made of the best of *white oak*. The handles are *steamed* and then *bent crooked*, instead of being sawed out. This makes them much stronger and more durable. The castings are made from good *new pig iron*, without any admixture of *old scrap*. The wrought iron work is of excellent quality, with *extras* attached to the plows. A liberal discount to dealers.

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March 1—3t.

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A. B. ALLEN & Co., 187 Water-Street, New-York.
March 1—3t.

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☞ ADVERTISEMENTS inserted in the Cultivator, at the rate of $1.00 per 100 words, for each insertion.

☞ Two editions of The Cultivator are issued—one without covers and unstitched, which, by the decision of the Postmaster General, is subject to *newspaper postage* only—the other, stitched in printed covers, the postage of which would be 3½ cents per number. The covered edition is never sent by mail, except particularly requested.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES

Vol. IV. ALBANY, JUNE, 1847. No. 6.

BREEDING HORSES—No. I.

Messrs. Editors—In the January number of the Cultivator, you made some remarks on breeding horses. I fully agree with you in regard to the advantages that would accrue from rearing good stock of this description; and I admit also, the importance of knowing the history or origin of our best horses. On this point, I notice that you attribute the excellence of some of our best roadsters to an admixture of the blood of the English race horse with our "country" mares. I shall not at present dispute the correctness of this conclusion; but as some may draw the inference that a resort to that blood would now be productive of equal advantages, I wish to offer a few remarks; and after having duly considered this point, I propose, with your leave, to make some observations on the best mode of improving our horses for the carriage and road.

First, then, I would observe that the horses spoken of by you as having produced so great an improvement in the stock of the country, were "*blood horses of the olden time.*" This is a distinction which I consider it important to bear in mind, as in my opinion a great change has taken place in the character of blood horses within the last seventy or eighty years. The fashion of the turf has changed; formerly, long races with heavy weights, were the test of superiority; now it is short races with light weights. With this change there has been a corresponding variation in the character of race horses. Instead of a strong, close-knit, substantial animal, able to carry weight and sustain himself under long-continued action, the object now is to obtain one whose conformation will admit of his making the longest and most rapid strides for a short time. All who have any knowledge of animal locomotion, know that quite a different form and proportions are necessary for the different purposes mentioned—they know, practically, that though long legs may give speed, short ones are required for endurance.

But in relation to the difference between the blood horses of the "olden time," and those of the present day, I do not wish you to rely solely on my own statements, and I will therefore offer authority which I think will not be questioned. I will first submit the testimony of English writers, and afterwards that of competent individuals of our own country, and thus "by the mouths of many witnesses" establish the point.

The writer of an essay "On the Improvement of the Breed of Horses," published in the (London) *Farmers' Mag.* for 1845, states that the number of inferior horses in England has very much increased within a few years, and he proceeds to inquire into the causes of this result:

"The description of horses to which our inquiry extends, are of that class constituting hunters and roadsters, both in saddle and harness, coachers and chargers, or what is called 'half stock.'" The qualities which are required in this description of stock, he observes—"are speed and endurance, with the capability of carrying heavy weights, with varied pace, through deep ground across a broken country; and in order that they should possess these capabilities, they should have what are commonly termed, in hunters' phraseology, '*bone, muscle*, and *compactness*,' by which is understood compactness of form, and the bone and muscle in their proper places. * * * It would appear that our blood stock formerly possessed these characters in an eminent degree, and by reference to former sporting publications, it will be seen that they were shorter in the leg, and capable of carrying heavy weights and running long distances; now they run with light weights and short distances, where bottom is not so necessary. Our fleetest racers were then what are now called *small* horses, which means that they were not the tall, lengthy, leggy racers of the present day, but compact, muscular, and remarkable for their capabilities of carrying heavy weights, and power of endurance. * * * This change in our blood stock has originated in consequence of alterations which have taken place on the turf. If the great stakes at present were two and three miles, instead of half or one mile distances, they would certainly be won by the 'stoutest blood,' though not perhaps, the fastest horse. * * * A mile is not sufficient to try the strength and endurance of any horse, although it may do to test its speed for the purposes for which he is now chiefly required, viz., *to win a heavy stake.*"

An impression prevails in this country, that blood horses, with long pedigrees, must of course be valuable, and calculated to improve our common stock. Hence it is that large patronage is frequently bestowed on stallions, which, excepting in length of pedigree, are decidedly inferior. This tends greatly to increase the number of poor horses. The same error in breeding prevails in England, and produces the same ill consequences. This is shown by Mr. John Burke, Jun., in an essay on the "Breeding and Management of Horses on a Farm," published in the fifth volume of the *Journal of the Royal Agricultural Society*, 1845.) Speaking of the numbers of inferior horses, with thorough-bred pedigrees, which are kept as stallions, Mr. Burke says—"This system is tantamount to the supposition that a horse of full blood, must *ipso facto*, be an animal likely to beget stock of a superior description; whereas, those who have paid only a moderate share of attention to the subject of breeding, must be aware that *there is perhaps no distinct species* [breed ?] *of horses among which are to be found so many absolutely worthless animals, as among those that are thorough bred.*" This fact, he adds, is fully borne out by the great numbers of "weedy the rough-bred hacks" which are shown about the country, and which, though they have, he admits, "some degree of showiness," are nevertheless quite unfit to go through with only a very moderate share of fatigue, with a weight of twelve stone, [168 lbs.] on their backs;" and he adds that in all probability, many of them might be purchased at the close of the season, "for a less sum than the first cost of begetting them."

Prof. Low, in his "Illustrations," speaks directly to this point. He says—"It is difficult to institute a precise comparison between the horses of a former age and those of the present day; but it is the opinion of the most careful observers, that the present breed of race horses has for a period past been tending to become small, long-limbed, delicate in constitution, and accordingly inferior to the elder horses of the turf."

Of a similar character is the testimony of a correspondent of "*Bell's Life in London*," 1845:)

"The English race horse is an animal of which all classes of our countrymen are justly proud; but at the same time it may be doubted whether the great and numerous prizes now offered to speed, without much regard to stoutness do not produce results injurious to the country; and I wish to call the attention of your readers, who comprise most of the sporting public,) to the present state of our horses. The Arabian blood, by its mixture with ours, has long since attained to a wonderful degree of perfection; and racing having been at an early period enrolled among our national amusements, the attention of the most wealthy among us has been directed to race horses, and to the breeding of them with the utmost possible speed. Formerly horses had to run four miles at high weights; now it is a course of a mile and a half, with light weights, to try to approximate to the speed of steam. One attempt has been made to stem the torrent, by the race instituted some years ago by the Duke of Portland, but it was against the fashion, and it was given up; and if any one objects that such a race is more cruel and more distressing to horses than a short one, I say he can know but little of racing, for horses differ much more in stoutness than in speed; and as you lengthen the course you do away with the keenness of the contest, which is what causes the distress, and this in fact is the very reason why the B. C. [Beacon course, which is 4 miles, 1 furlong, and 138 yards round,] is unpopular. A leggy animal, with a long stride is worth more now than he was in the days of our fathers; this I say is entirely wrong and mischievous. Then, as to another point—no regard is paid to sound and lasting legs and feet for mares or stallions; these points would be carefully looked to for a riding horse, but when it comes to breeding a more valuable animal, the breeder says, 'Oh, the colt will come out well at two years old, and win me a few good stakes, and that will do, never mind his legs.' Then again, what carelessness there is as to size and power, especially as to the dam; on these points, stoutness, soundness, and power, I say, most wonderful indifference is daily shown, as any man will see who looks through thorough bred studs, in nine cases out of ten. Let him go to Tattersall's and almost all the thorough breds he sees sold will be thin long-legged colts, (most of them chestnuts,) with slight and upright pasterns, and small round fetlocks. What on earth are they good for? a Welsh pony would kill three or four of them in a costermonger's cart. Then we expect to sell our thoroughbreds to foreigners, but they will not buy small lame eats; they buy nothing but the very best sort we have. In short, whether for use at home, or as merchandise to go abroad, we ought to be more particular in the shape, size, and soundness of sires and dams of horses, than the Short-Horn breeders are as to their cattle; and whereas, most of us, on the contrary, trust to blood, and think of little else. I have addressed you long ago on this subject, but I do so again because I think it one of great and national importance, and because I see the evil growing daily. There would be much less expense and much less disappointment, if one colt was bred from a sire and dam of true form and soundness, than if six were bred at random, with the hope of one turning up a trump. Again, it is not near so easy now as it used to be to buy a good, strong, young hunter. And steam is in some measure the cause of this, for an old fashioned, compact, active, coaching mare, when her work was over, bred a good hunter by a lengthy thorough-bred horse; now, the demand for the machiner is nearly gone, and the animal is very scarce. In the want, then, of this middle class, from which to recruit the patrician blood of our Sultans, &c., we have an additional motive to be careful about strength and size in the latter. I have been bitten by thorough-breds when younger, but I think of them now, that though a large and powerful thorough-bred is the finest form of a horse, bring me them at random, and I will engage three out of four will be irredeemable rips."

In my next I shall adduce the testimony of our own countrymen, in relation to this subject. Equus.

Cultivation of Onions.—John W. Proctor, Esq., of Mass., states in the *Boston Cultivator*, that there are three individuals in his neighborhood, each of whom produces annually from two thousand to three thousand bushels of onions. They, in some instances, rent the land at from $6 to $10 per acre, and the average product is 300 bushels per acre. He says the onions, when ready for market, are worth $100 more than the rent of the land and the cost of the manure, leaving this sum as the compensation of the labor applied." He does not give the price of the onions per bush., but we have lately seen it stated that the average in that neighborhood is thirty-seven and a half cents per bushel. The same land is continued in onions several years in succession. Mr. P. states that some lots have borne this crop every year for ten years, without any depreciation in yield. "Muscle-bed" and leached ashes are much used for manure. Great pains are taken in the preparation of the soil, particularly to have the top well pulverized. The seed is sown with great accuracy by a machine, and strict attention is given to keeping the crop clear of weeds. It is calculated that one man and two boys of the ages of 12 to 16 years will manage ten acres. Mr. P. says he knows of several individuals who commenced this business at the age of twenty-one, and have pursued it for a dozen years or more, have brought up respectable families, and are now worth comfortable estates.

Improved Implements.—In the report for the county of Champaign, published by the Ohio Board of Agriculture, it is said—"Hussy's reaping machine, worked by horse power, was introduced in this county during the past harvest, and some two or three hundred acres of wheat cut with it. It cuts the grain without waste, and leaves a short even stubble. It employs nine men and four horses to work it, and cuts upon an average 12 to 15 acres per day. The man who sits on the machine, to pass the grain off the platform, works very hard, and to great disadvantage, from the position in which he is obliged to sit. Machines are now being made in Urbana, our county town, to order, by a machinist who promises to make them so that they will pass off the grain to the binders for any size sheaf that may be desired, thus superseding the necessity of a man on the machine for that purpose. Improved threshing machines, whereby the grain is threshed and cleaned by one operation, at the same cost per bushel as was formerly paid for threshing alone, are now in pretty general use in this county. The wheat-drill was used by several of our farmers last fall, for the first time."

VALUE OF DIFFERENT KINDS OF VEGETABLE FOOD,

BASED UPON THEIR PER CENTAGE OF NITROGEN.

BY EBEN N. HORSFORD, A. M.,

Rumford Professor of *Application* of *Science* to the *Arts*, in the University at Cambridge, Mass.

INTRODUCTION.

SINCE Gay-Lussac's discovery of nitrogen in the seeds of plants, the conception of animal nutrition has been assuming a more and more definite character.

Already had the principal proximate ingredients of meals, by taking advantage of their physical properties, been separated from each other; gluten, albumen and legumin, starch, gum, sugar, dextrine, and woody fibre were known, and their physical, as well as some of their chemical properties,* had been studied.

Their more accurate chemical constitution was reserved to a later period, when the interesting disclosure was made, that they may be arranged in two classes, those containing nitrogen, and those containing no nitrogen; and that the former as well as the latter are, among themselves, nearly identical in composition.

It is well known that laborers, supplied only with food containing no nitrogen, become incapable of executing their tasks; and further, that the corporeal system, even without labor, cannot be sustained upon such food. The discovery of the near identity in chemical composition between vegetable albumen, fibrin, and caseine, and the corresponding bodies found in the animal kingdom, gave the above facts their explanation.

The food must contain an ingredient suited to replace the animal matter consumed.

This being known, and the quantitative relation of the several elements of the nitrogenous compounds being also known, an estimate of the value of given kinds of food, becomes, in the hands of the chemist, a problem of comparatively easy solution.

OBJECT OF INVESTIGATION.

The following investigation, undertaken at the suggestion, and under the direction of Prof. V. LIEBIG, in the Giessen Laboratory, had for its object the determination of the *relative values of different kinds of vegetable food.*

These values are threefold.

The various forms of food derived from grains, herbage, and roots, furnish, 1st, bodies containing nitrogen; 2d, bodies destitute of nitrogen; and 3d, inorganic salts, —all of which are serviceable in the animal economy.

The nitrogenous bodies, from their solution in the blood, form the tissues—the actual organism. The bodies wanting nitrogen contribute, by their more or less perfect combustion, to the warmth of the animal body; and the salts of the alkalies and alkaline earths, serve in building up the osseous framework, beside constituting an essential part of every organ of the animal system.

Their values for the latter purpose are in proportion to the phosphates the ashes contain.

Their values for the second purpose above-mentioned, may be considered, in general, as in the inverted relation of their values for the first;—since the larger the proportion of nitrogenous bodies, the less must be the proportion of bodies wanting nitrogen.

Their values for the first purpose, that of ministering to the support and growth of organic tissues, have been the specific object of the hereafter enumerated determinations.

PREVIOUS LABOR.

Boussingault, to whom the agriculturist is so largely indebted for practical researches bearing upon the interests of husbandry, has not left this field untrodden. It was thought, however, that the worth of his table of nutrition from the vegetable kingdom, could lose nothing by a series of carefully conducted analyses, embracing the chief varieties of vegetable food consumed by men. It was, moreover, conceived, that in substances containing so small a per centage of nitrogen as grains and roots generally, the method of Messrs. Varrentrapp and Will for determining nitrogen, would give more accurate results than that of Dumas, employed by Boussingault. The analyses hereafter given, of the same substance, rarely varied from each other more than one-tenth of one per cent.; and yet the determinations which follow, and those of similar substances made by the distinguished French chemist, in general differ no farther from each other than might be expected, from productions of the same vegetable species, grown on different soils.

Buckwheat, (*Polygonum fagopyrum*) constitutes an exception to this remark. In the table of analytical results, page 294, Boussingault's Economie Rurale, (Ger. Edition,) this grain has a nitrogen per centage of 2.40, while two ordinary varieties of wheat (*Triticum vulgare*) have 2.33 and 2.30 per cent. Buckwheat meal from Vienna gave, as shown below, 1.08 per cent. Buckwheat grains (*Polygonum Tartaricum*) from the experimental field of the Hohenheim Agricultural Institute, gave 1.56 per cent. of nitrogen, while the analyses of three superior varieties of wheat, grown in the same field, gave respectively, 2.59, 2.68, and 2.69 per cents. This species was further found to contain 22.66 per cent. of woody fibre.

The equivalent* value of buckwheat, according to Boussingault, wheat being 1.00, is 1.08. The following analyses give, for its equivalent value, 1.70. For that of the Vienna buckwheat meal, 2.45.

GRAINS AND ROOTS—WHERE PROCURED.

For the following investigation, the meals, table peas and beans, and lentils, were procured by Prof. v. Liebig, from Vienna. The grains, with the exception of rice and *Triticum monococcum*, were furnished from the cabinet of the Hohenheim Agricultural Institute, in the kingdom of Wurtemberg, in reply to a request for the most approved sorts of cerealia cultivated in Europe. The roots were from Giessen.

MODE OF INVESTIGATION.

The several meals, grains, and roots, in their market condition, were dried in a water bath, at 100° C., (212 Fah.)

In drying the potatoes, beets, carrots, and turneps, care was taken to cut as thin shavings as possible, which with the least delay were placed singly upon watch-glasses, weighed and seated in the water-bath.

For carbon and hydrogen, the combustions were made with oxide of copper, a mixture of chlorate of potash and oxide of copper, having been placed at the extremity of the combustion tube.

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* Fr. Marcet found gluten consisting of 55.7 per cent. of carbon, 22.0 per cent. of oxygen, 7.8 per cent. of hydrogen, and 14.5 per cent of nitrogen.—*Annal. de Chim. et de Physiq.*, XXXVI., p. 27.

* By equivalent is meant that which may replace—or is equal to in value. In this case, it signifies the equal in value as food.

It was found difficult to reduce the woody fibre of the oats, barley, and buckwheat, to the requisite fineness for a complete combustion. Where the difficulty could not readily be overcome, in addition to chlorate of potash at the extremity of the tube, it was found well, in filling with mixed substance and oxide of copper, to add, at intervals of an inch and a half, a small quantity of finely pulverized and thoroughly mixed oxide of copper and chlorate of potash. The successive evolutions of oxygen in this case, thoroughly reoxidized any portions of copper reduced in the progress of combustion, and secured the most satisfactory results. Difficulty presented itself also in the combustion of the potatoes, beets, and other roots, arising from the extreme compactness of the substance when dried. It was however, overcome by the method already mentioned.

The nitrogen determinations, as already intimated, were according to the method of Messrs. Varrentrapp and Will.

The per centage of woody fibre was determined in the following manner. Grains, such as had been analyzed, were digested upon a sand-bath several weeks in dilute hydrochloric acid, one part of acid to a thousand parts of water. At intervals of from eight to ten days, the fluid was poured off, and, with diluted acid as before, the digestion resumed. After a month and a half, the woody fibre not appearing wholly freed from this substance, an equally dilute solution of caustic potash was employed, and the digestion therewith resumed. At the end of two months, the woody fibre of the oats, barley, and buckwheat, were poured upon filters, thoroughly washed with distilled water, and dried at 100° C.

Of beans and peas the hulls, separated by treating with cold water, were alone digested with dilute caustic potash, repeatedly pouring off the liquid and resuming the digestion afresh. At the conclusion of four weeks, the hulls were washed and dried at 100° C.

MODE OF ESTIMATE.

To express in hundred parts the results of analysis, the carbon, hydrogen, oxygen, and sulphur of the nitrogenous ingredients, were estimated from the per centage of nitrogen.[*]

The carbon and hydrogen so estimated, deducted from the whole per centage of carbon and hydrogen, gave what belonged to the starch, gum, woody fibre, sugar, &c. The oxygen of the latter was estimated from the carbon, by the formula $C_{12} H_{10} O_{10}$[†]

The detailed analyses and determinations, covering thirty-five pages octavo, of Liebig's Annalen, are omitted, the results, *merely*, being given, in the tables which follow.

RELATIVE WORTH OF INDIVIDUAL KERNELS.

According to their Mass and per cent. of Nitrogen.

NAME.	Ten kernels in fresh condition, weighed in grammes.		Relative weight of individual kernels Bush rye taken as unity.	Per cent. of Nitrogen in fresh condition.	Relative amount of nitrogen in the individual kernels, Rush rye taken as unity
Bush rye............	0.1220	gr.	1.	2.39	1.
Rush rye,...........	0.1838	“	1.5	2.13	1.3
Talavera wheat. ...	0.3606	“	3.	2.19	2.7
Whittington wheat, .	0.4239	“	3.5	2.30	2.9
Sandomierz “	0.3199	“	2.8	2.12	2.4
Indian corn.........	3.5934	“	29.4	1.95	24.
Jerusalem barley,...	0.5312	“	4.3	1.92	3.6
Common barley,....	0.3955	“	3.2	2.40	2.4
Kamschatka oats, ...	0.3446	“	2.8	2.08	2.4
Early panicled oats..	0.3689	“	3.	2.45	3.1
Tartarian buckwheat	0.2566	“	2.1	1.33	1.2
Table peas,.	2.6080	“	21.4	3.83	34.3
Field peas.	1.9828	“	16.3	3.68	25.1
Table beans.	3.1431	“	25.5	3.87	41.2
Large white beans..	5.2[illegible]90	“	43.3	3.86	69.9

TABULAR VIEW

Of Elementary and Inorganic Ingredients, in per cents., of substance dried at 100° C.

NAME.	Nitrogen.	Carbon.	Hydrogen.	Oxygen.	Sulphur.	Ashes.
Wheaten flour, Vienna, No. 1,...	3.00	45.74	6.70	43.23	0.23	0.70
“ “ “ No 2,...	2.12	45.18	6.65	44.81	0.15	0.67
“ “ “ No. 3,...	3.44	46.86	6.78	42.65	0.25	1.11
Talavera wheat, Hohenheim,....	2.59	44.93	6.25	43.35	0.18	2.80
Whittington “ “	2.68	44.42	6.82	42.56	0.[illegible]	3.13
Sandomierz “ “	2.69	44.20	6.68	42.28	0.19	2.40
Rye flour, Vienna, No. 1, ...	1.87	44.37	6.65	44.55	0.13	1.33
“ “ No. 2, ...	2.93	45.19	6.56	42.77	0.21	1.07
Bush rye, Hohenheim,.	2.78	45.52	6.58	43.51	0.15	0.86
Rush rye. “	2.47	45.23	6.57	43.98	0.18	2.37
Potenta meal, Vienna,.	2.14	45.04	6.60	44.62	0.15	0.66
Yellow Indian corn. Hohenheim,	2.[illegible]0	45.45	6.61	44.66	0.16	1.92
Triticum monococcum, Giessen..	2.07	44.54	6.72	44.24	0.15	2.01
Jerusalem barley. Hohenheim, ..	2.31	45.50	6.87	44.68	0.16	2.84
Common winter barley, “ ..	2.79	45.22	6.99	42.16	0.20	5.52
Kamschatka Oats, “ ..	2.39	46.50	6.[illegible]4	45.59	0.17	3.26
Early white panicled oats, Hoh.,	2.82	46.66	6.71	44.68	0.20	4.14
Common rice, ...	1.16	44.61	6.53	46.62	0.08	0.36
Buckwheat flour, Vienna.........	1.08	44.27	6.54	46.50	0.07	1.09
Tartarian Buckwheat, Hohen., ..	1.56	45.42	6.45	46.50	0.11	2.30
Table peas, Vienna, ...	4.42	45.12	6.73	37.92	0.14	3.18
Field peas. Giessen, ...	4.57	45.33	6.42	38.75	0.14	2.79
Table beans, Vienna,............	4.47	45.07	6.63	38.73	0.14	4.38
Large white beans, Giessen, ...	4.59	45.18	6.80	38.55	0.14	4.01
Lentils Vienna, ...	4.77	45.35	6.75	38.28	0.15	2.60
White potatoes, Giessen,........	1.56	43.86	6.0[illegible]	44.77	0.11	3.61
Blue potatoes, “	1.20	43.25	6.31	45.00	0.08	3.36
Carrots, “	1.67	43.34	6.22	43.90	0.12	5.77
Red beets, “	2.43	40.99	5.72	3[illegible].37	0.17	6.43
Yellow French beet, “	1.81	[illegible].0[illegible]	5.9[illegible]	41.06	0.13	[illegible]2
Ruta baga, “	1.45	[illegible].31	6.01	42.5[illegible]	0.1[illegible]	[illegible].01
White turneps, “	1.98	3.19	5.68	42.96	0.14	[illegible]
Onions, “	1.18	......	......	......	......	8.53

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[*] Mulder's analysis of coagulated albumen, Scheerer and Jones' analyses of legumin and gluten (Annalen der Chemie und Pharmacie. XXXIX., page 360;) and Heldt's analysis of the gluten of rye (Annalen der Chemie und Pharmacie, XLV., page 198.) differ so little from each other, that a single formula has been constructed upon Mulder's analysis of coagulated albumen, and with a little modification employed in determining the elements of the nitrogenous ingredients of all the substances subjected to investigation.

Mulder's per centage of oxygen was reduced by that of the sulphur, which has been ascertained during the last session of the Giessen Laboratory, and kindly furnished to me by Dr. Ruling. It is for gluten, 1.14 per cent., and for legumin 0.50 per cent.

The still undetermined phosphorous is included in the oxygen.

Below follow the analyses alluded to above:

	GLUTEN. Scheerer.	Jones.	COAGULATED ALBUMEN. Mulder.
Carbon,...........	54.60	55.22	54.99
Hydrogen,.........	7.30	7.42	6.87
Nitrogen,.........	15.81	15.98	15.66
Oxygen, P. & S.,..	22.28	21.38	22.48

	LEGUMEN. Scheerer.	Jones.	GLUTEN OF RYE Heldt.
Carbon, ...	54.13	55.05	56.38
Hydrogen, ...	7.15	7.59	7.87
Nitrogen, ...	15.67	15.89	15.83
Oxygen, P. & S.,..	23.03	21.47	19.96

The numbers employed were

Carbon,...................	54.99	
Hydrogen,................	6.87	
Nitrogen,.................	15.66	
Sulphur, ...	1.14	— 0.50
Oxygen and Phosphorus..	20.92	— 21.98

Mucin, discovered by Berzelius, is recognized among the nitrogenous compounds. As analyses of vegetable fibrine and vegetable albumen, with and without it, according to Prof. v. Liebig, give the same result, it may be presumed that its composition is identical with theirs.

[†] The following list of the chief bodies present in the substances analyzed, with their annexed constitution, will justify the method pursued.

Starch,..............................	$C_{12} H_{10} O_{10}$
Dextrine,............................	$C_{12} H_{10} O_{10}$
Gum,.................................	$C_{12} H_{10} O_{10}$
Woody fibre, Payen,..................	$C_{12} H_{10} O_{10}$
Cane Sugar,..........................	$C_{12} H_{11} O_{11}$
Pectic acid, dried by 140° C, Regnault,.....	$C_{12} H_{8} O_{11}$
Pectic acid, Mulder,.................	$C_{12} H_{8} O_{10}$
Pectin combined with P b O, Fremy, ...	$C_{10} H_{9} O_{11}$

Starch and woody fibre exceed in per centage, all the other ingredients enumerated, in most of the substances analyzed; and are beside, identical in constitution with gum and dextrine.

CHAFF AND HULLS, EXPRESSED IN PER CENT.

Name.	Chaff and hulls at 100°.	Ashes of chaff or hulls	Woody fibre.
Common Winter Barley,	5.40	1.90	5.30
Panicled Oats,	16.66	3.35	16.10
Tartarian Buckwheat,	22.67	0.08	22.66
Table Peas.	7.65	2.47	7.47
Field Peas.	6.11	1.86	6.00
Table Beans,	4.01	3.84	3.86
Large white Beans,	4.41	7.48	4.09

TABLE

Of Nitrogenous Ingredients in per cents

Name.	Nitrogenous Ingredients.		Water
	Dried at 100° C.	In fresh condition.	
Wheat flour, Vienna, No 1,	19.15	16.51	13.83
" " " No. 2,	13.54	11.69	13.65
" " " No. 3.	21.97	19.17	12.73
Talavera wheat, Hohenheim.	16.54	13.98	15.43
Whittington wheat, Hohenheim.	17.11	14.72	13.93
Saudomierz " "	17.18	14.51	15.48
Rye flour, Vienna,	11.94	10.34	13.78
Rye flour Vienna, No. 2,	18.71	15.96	14.68
Rush rye, Hohenheim,	17.75	15.27	13.94
Rush " "	16.77	13.59	13.82
Polenta meal, Vienna.	13.66	11.53	13.36
Yellow Indian corn, Hohenheim.	14.68	12.48	14.96
Triticum monococcum, Giessen,	13.22	11.30	14.40
Jerusalem barley, Hohenheim.	14.74	12.26	16.79
Common winter barley. Hoh'm.	17.81	15.35	13.80
Kamschatka oats, Hohenheim.	15.26	13.32	12.71
Early panicled oats,	18.00	15.67	12.94
The same, without chaff.	21.57	18.78	12.94
Common rice.	7.40	6.27	15.14
Buckwheat meal, Vienna,	6.89	5.84	15.12
Tartarian buckwheat, Hohen'm.	9.96	7.94	14.19
Table peas. Vienna,	28.02	24.41	13.43
Field peas, Giessen,	29.18	23.49	19.50
Table beans Vienna.	28.45	24.71	13.41
Large white beans, Giessen,	29.31	24.67	15.80
Lentils, Vienna,	03.46	26.50	13.01
White potatoes, Giessen.	9.96	2.49	74.95
Blue potatoes, "	7.66	2.37	68.49
Carrots, "	10.66	1.48	86.10
Red beets, "	15.50	2.93	81.61
Yellow French beet, "	11.56	2.04	82.25
Ruta baga beet, "	9.25	1.54	83.28
White round turneps, "	12.64	1.54	87.78
Onions, "	7.53	0.46	93.78

TABULAR VIEW

Of Nutriment values expressed in equivalents, wheat placed at 100.

Name.	Theory.		Experiment.
	Dried at 100° C.	In fresh condition.	In fresh condition.
Wheat,	100.	100.	94.
Rye,	98.8	97.6	97.0
Indian corn,	115.	113.	108.
Triticum monococcum,	128.	124.6	——
Barley,	104.	102	101.5
Panicled oats,	92.	90.	112.7
The same, without chaff,	78.	76.3	——
Kamschatka oats,	110.	106.	112.7
Common rice,	220.	225.	——
Tartarian buckwheat.	170.	166.	122.7
Table peas,	59.9	57.6	90.7
Field peas,	57.7	60.	90.7
Table beans,	59.2	57.	90.7
Large white beans.	58.8	57.	94.7
Linsen.	55.5	53.	——
White potatoes,	169.8	565.6	429.
Blue potatoes,	220.8	596.3	429.
Carrots,	158.6	959.4	545.4
Red beets.	100.	501.5	——
Yellow French beet,	146.	689.5	643.
Ruta baga.	182.7	919.4	589.7
White turneps,	133.8	919.4	1000.
Onions.	224.6	210.6	——

The last column, in the above table, contains the average results of experiments with a view to practical equivalents, as given by Boussingault, pp. 292, 295 German ed. One of the results with wheat differs so greatly from the others, that it was neglected.

CONCLUSIONS.

By comparing the results of the above investigation with each other, and with those previously known, the following conclusions have been arrived at.

That the same species of cereal grain, grown on different soils, may yield unequal percentages of nitrogen.

That wheat and rye flours, to the eye and sense of feeling undistinguishable from each other, may differ by from one to three-tenths of their whole quantity of nitrogen.

That one-seventh of fresh, ripe cereal grains, is moisture, that may be expelled at a temperature of 100° C.

That root crops grown on different soils, may yield unequal percentages of nitrogen.

That the percentage of moisture in edible roots is a constant quantity for each variety.

That beets, carrots, and turneps, have a larger percentage of moisture than potatoes.

That more aliment is contained in a given weight of peas, beans, or lentils, than in an equal weight of any other kind of food above analyzed.

That in several of the grains and roots analyzed, there are organic bodies beside those identical in composition with gluten and starch.

That the ashes of carrots, beets, turneps, and potatoes, as Prof. v. Liebig has already remarked, contain carbonates.

That the ashes of all the varieties of vegetable food above analyzed contain iron.

Finally that the difference between the theoretical equivalents of vegetable food, as estimated from the percentage of nitrogen, and those ascertained by the experiments of stock growers; and the differences between the results of different stock growers may be attributed to the following causes:—

First, because the percentages of nitrogen and carbon, in the grains and roots of the same species or variety, when grown on different soils, are unequal.

Because the prominent test employed has been increase or diminution in weight, of the animal fed. Increase in weight may arise from secretion of fat, derived from the sugar and starch of plants. Diminution in weight may follow unusual activity, increasing the consumption of fat already present.

Because the experiments in but few instances have been made with substances whose moisture, nitrogen, &c., had been previously ascertained.

Because theoretical equivalents have been employed in conditions unequally suited to digestion. The same article of food, coarse or fine, fresh or prepared for easy digestion, yields unequal measures of nutrition.

Because the condition in which the animals were kept, was not noticed; whether they had more or less of labor to perform; whether they were pastured or stall-fed.

Because, lastly, as already intimated, the tendency to fat or flesh secretion, in animals of the same species, and even of the same variety, is subject to great variation.

Large pigs—Berkshire blood.—**Timothy Brockway** states in the *Boston Cultivator*, that Messrs. **John & Samuel Foot**, of Bradford, Ct., killed four pigs last fall, two of which were nine months and twenty days old, and the other two were nine months and twenty-eight days old, whose dressed weights were 401, 419, 423, 473 pounds. It is stated that they were got by Mr. **Brockway's** "Improved Berkshire" boar, which took the premium at the New Haven show in 1845. The pigs were all of one litter.

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Exportation of Apples.—Elihu Burritt urges the attention of the people of Maine to the raising of apples for foreign market, stating that apples which in Maine are made into cider, or fed to hogs, will command a dollar a bushel in England, the cost of sending them he estimates at twenty cents per bushel.

THE FARMER'S NOTE BOOK.

Rensselaer Institute.—In calling attention to the announcement of the Rensselaer Institute, for the summer of 1847, it may not be inappropriate to make a few remarks in relation to the nature and specific characteristics of this institution.

The Institute is not, as is very frequently supposed by persons unacquainted with its peculiarities, a first, second, or third rate Academy or Grammar School; nor is it a seat of universal learning, in the ordinary acceptation of this phrase,—in other words, a College or American University; but it is, essentially, a *Polytechnic Institution,*—a school of theoretical and practical science, in which the study of the mathematical and physical sciences, natural history, chemistry, and geology, and the graphic arts, in connection with their practical applications to the arts, manufactures, and agriculture, constitutes the employment of its students. As such it was first organized by its munificent patron,—as such, it has been, and is to be continued.

The exercises at this Institution, in every stage of the student's progress, are, strictly, the study of subjects—not the study of authors. Text books are employed, more or less, in all parts of the course, for convenience in the arrangement of exercises; but full latitude is allowed, and encouragement directly given to the practice of consulting different authors, for the promotion of exactness no less than greater fullness and liberality of knowledge.

In every instance, a general lecture is first pronounced by a professor, after whom, each member of the class follows with a lecture on the same subject, prepared from his text-book, the reading of other authors, and the ideas gathered orally from his professor. Except, therefore, in a very limited degree, instruction by recitations constitutes no part of the system. The student is required to give a clear and extended exposition, according to his ability, of the subject brought before him, in the form of an *extemporaneous demonstrative or illustrative* lecture, the performance of which, no one, who has had any experience in such exercises, need be told, requires much careful preparation, and to be tolerable, must be based on real knowledge of the subject.

In the study of chemistry and experimental physics, after the general lecture by the professor, the students follow in order with their expositions; and besides the pronunciation of their lectures, are required to demonstrate or illustrate every proposition or principle, as it may require or admit by experiments, models, or diagrams, with their own hands.

The subjects embraced in botany, mineralogy, and geology, are studied in a similar manner. They are only pursued through the aid of direct examinations of specimens from the cabinets, or those derived immediately from the field; and as in chemistry and physics, so in these, with respect to the lectures of the students, they must be demonstrative expositions of the particular subject by appeal to the objects themselves. In this manner, a course of lectures is adapted to the science in question, in addition to which, each student makes, preserves, and arranges a collection of plants and minerals, in illustration of the flora, mineralogy, and geology of the vicinity of the Institute, by frequent excursions for these objects, into the surrounding country.

The subjects in practical mathematics and mechanics are pursued with direct reference to their applications to civil engineering, manufactures, and extensive operations generally, in which the exact sciences are more or less called into requisition. Each student is instructed in the construction, adjustments, and modes of using all the instruments employed; and he is not considered properly acquainted with his subject, until he can lead a party into the field, and conduct any of the required operations with tolerable credit to himself in respect of the accuracy of his results.

Agricultural chemistry has always received prominent attention at this Institution; and in this connection, it may be further remarked, in regard to the subjects of botany, chemistry, and geology, that special attention is given to the study of the germination and growth of plants, the organic functions of their several parts, and the processes of nutrition as influenced by natural agencies and artificial appliances, by comparisons of the different views of distinguished authors of original researches on these points, by repetitions of their more important experiments, and by special independent researches. For the promotion of these objects, students are instructed not only in the determination of the species and natural affinities of plants, and the discrimination of minerals by external characters, so far as may be practicable, but, also, in the chemical examination of organic products, of soils, and of the important fertilizing appliances, the marls, lime stones, &c.

From the foregoing remarks it will be seen that, independently of its occupancy of ground claimed by no other institution in the United States, the Institute is not less peculiar in its mode of conveying instruction to its students. Indeed, it may with some confidence be questioned, whether, in the last particular, it be paralleled by any other institution in the civilized world. The polytechnic schools of France and Prussia, have similar objects and similar courses of instruction, but in regard to the *mode* of study, the Rensselaer Institute is believed to stand alone. Nor would the mere possession of singularity in this respect be deemed a merit, were its condition simply that of being about to enter upon an untried experiment, for the present age is, perhaps, as prolific of unsuccessful as of successful adventure. Whatever, therefore, is asserted of the Institute is predicated, not of a doubtful issue, but of an experience of more than twenty years,—an experience, to which, the annals of the institution and the recollections of its friends, will, it is believed, fully justify an appeal. B.

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Agricultural Advantages of Nelson County, Va.—Nelson county is in the centre of the state, just at the base of the great Blue Ridge, on the eastern side—hilly, and finely watered, with soft free stone water, well timbered with the whole family of oaks, the poplar, and the chestnut, pine, hickory, walnut, beech, and many other kinds of timber. The soil is generally red, and when otherwise, a dark grey rich mould. As to health, if old Hygeia herself would take a habitation here below, this would be her head-quarters most undoubtedly.

Wheat, and everything cereal, grows as well here as any where. Indian corn cannot be excelled this side of Kentucky. No part of the state has produced more and better tobacco; and lastly, though far from the least, the grasses of all descriptions, as far as tried, *properly*, prove to be perfectly at home. The community is orderly, law-loving, and intelligent.

The James river and Kanawha canal sweeps the broadest side of the county, from whence to Richmond, is, by water, about 120 miles. Price of the lands, below the mountains, about one half of which is, or would be, in market, at from $4 to $20 per acre, the meanest to best inclusive. The mountains, or the unimproved, i. e., the *uncleared*, fifty cents to one dollar per acre, and the improved from one to three dollars per acre, all of which is fine blue-grass land, and cannot be excelled for rye, oats, buckwheat, potatoes, flax, and turneps. Now, what more would a "northern" man want for a fortune ?

This country, among other advantages, is thought to be peculiarly adapted to the growth of fine wool, and the authority is one that no northerner can dispute, as he beats the whole batch of them with his sales every year, at Lowell, in quantity, quality, and price. I mean Mr. Samuel Patterson, of Washington county, Pa. He has visited us twice in the last twelve months, examined our county in all its bearings, and pronounces it, *in his opinion*, to be the "promised land" for growers of fine wool sheep, and as a proof of his sincerity has bought land in Bedford, and is about to commence operations.

Mr. Chas. T. Botts, the editor of the "Southern Planter," in a late editorial, (and a very able one,) alleges, as one reason why the northern farmer does not emigrate more to this country, the *extravagance* of our people. May-be it is so, in Mr. Botts' locality and the country adjacent, for there is the metropolis and the *focus of the remains of Virginia aristocracy*. Not so, with us of the mountains or upland part of the state. No people are plainer or *disposed* to be more economical.

I will add that our late legislature waked up from a fifty years' nap of stultification, and commenced doing something for the state, by way of beginning a generous internal improvement system—the resolutions of '98, '99 to the contrary, notwithstanding. In a few years our good old mother will be "herself again." NELSON.

Nelson, Va., April, 1847.

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TEA—HOW DRIED BY THE CHINESE.—The following account, by an eye witness, of the mode in which tea is gathered and prepared for market, by the Chinese, will doubtless be interesting to many of your readers. I extract it from a recent familiar letter to her parents, written by Mrs. CULBERTSON, wife of Rev. M. S. Culbertson, one of the missionaries of the Presbyterian Board, stationed at Ningpo, about twenty miles from which city the tea district visited, (on the 12th and 13th of May last,) is situated. This account, in addition to its being more full and definite than any other to which I am able to refer, is also valuable as showing important errors in some of the statements heretofore published, such as, that tea is so powerful a narcotic that the Chinese never venture to use it till at least a twelvemonth after it has been gathered—that the newly gathered leaves are first subjected to the steam of boiling water—that they are then dried in copper vessels, &c. It is important that such misstatements respecting the preparation of an article that is daily used by almost every family in our land, should be corrected. Yours truly, A. F.

Salem, N. Y., Feb., 1847.

* * * "On the side of the hill, we found women and children picking tea leaves from the shrub, which is as high as ordinary currant-bushes. [Perhaps I am mistaken here; Mr. C. thinks they were not over two feet high.] They are set a few feet from each other, and the leaves in form and size are very much like those of a wintergreen. A little farther on, we passed through a village of a thousand inhabitants, where we saw large quantities of tea drying on mats spread on the ground.

"But I am forgetting to tell you what I presume will be more interesting to *you* than anything else I can write about—the process of curing the tea. It is very simple, and the idea which some of you "outside barbarians" entertain, that tea is dried on *copper* is entirely incorrect. It is mostly picked from the bushes by women and children, into baskets, one person being able to pick about thirty "cattis" (or forty pounds) in a day. It is then spread on mats, and dried an hour or more in the sun, previously however, having some of the juice squeezed out, and the leaves somewhat curled, by rubbing them with the hand over a rough kind of matting, which lets the juice run off. After drying in the sun, it is ready to be "fired," which is an operation we watched some time, with much interest. A dozen or more pounds are put into a kind of kettle, resembling a potash kettle, except that it is low on the front side, and runs up some two feet behind. A man stands in front, and keeps the tea constantly stirring while being heated, which he accomplishes by thrusting his arms as high as his elbows under the hot tea, and giving it a toss upwards against the back of the kettle. This operation is kept up two or three hours, by two men, who constantly relieve each other. When this process is finished, it is ready for market, but tea that is intended for exportation is again fired slightly by the tea merchants before being shipped. We drank some that was growing on the bushes the day before, and might have obtained some that had been gathered and cured that day. This tea is of a fine quality, and is known as the "Tau-bah-san tea, from the name of the mountain on which it grows. Some of the finest of it is prepared for the Emperor. It is the *green tea* of which I have been writing. The *black*, it may be, is subjected to a process in some respects different."

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USE OF LIME AS A MANURE IN NEW JERSEY.—About from 1825 to '30, the farmers of this region began to learn that lime would change the soil of our naturally sterile hills, to the strongest kind of corn and wheat land; and indeed no one but an eye witness could believe the change that it has already wrought. Before we were aware of its power, some applied too much, and injured the land for two or three years; but by deep plowing and bringing up and mixing the clay with the soil, and growing clover, to equalize the proportion of vegetable matter with the lime, &c., a powerful wheat soil was formed. Those who say that every soil has lime enough naturally, should visit Morris. There they may see fields of thirty to fifty acres, on which nothing grows but what we call "poverty grass," and sassafras bushes, and in the one adjoining, as noble crops of corn, wheat, or oats, as any reasonable man would wish to see. And this too, is so certainly attributable to the lime, that all now use it, even the old Germans, whose prejudices have deprived them of its beneficial effects 20 years or more.

Any quantity of lime can be obtained at the kilns, for six to eight cents a bushel, every bushel of which, when slaked, will average double the quantity. I find by careful experiment, that the best manner of applying it, and in which it has the most immediate effect, is to place it in heaps of from 100 to 200 bushels, as may be most convenient, and leave it to pulverize by the action of the air and rain for two or three months. By this time it will become a carbonate, and is fit to apply to any crop, at the rate of 30 to 50 bushels per acre, or rather, double that quantity, it being slaked. Of course the quality of the soil must regulate the quantity; a good soil bearing a larger quantity than a poor one.

I have seen lime in the above condition, put upon corn hills before the corn was up, (a quart to the hill,) and strange as it may seem to those unacquainted with lime, except in its caustic state, with marked good effect, while the gaping crowd predicted ruin to the crop, not knowing the difference between it and fresh lime.

I have tried it fresh from the kiln, (a light dressing of 30 bushels to the acre,) harrowing it in, and this trifle, on account of its caustic property, caused a difference for the worse that could be seen a mile—other corn, unlimed, standing side by side. But its good effect *never* fails when applied in the former state.

You may take the poorest soil in New Jersey, and in three years, (by an interval of one year between two dressings of forty bushels to the acre,) can make it produce good corn., The manner is, first apply one dressing, and plow it in well and deeply; then plant corn and till it thoroughly, and the crop will be from 30 to 40 bushels of ears to the acre. The next April we sow oats, two bushels to the acre, and apply the other dressing of lime on the surface, harrowing in thoroughly with the oats, and "seeding down" with one harrowing, after sowing the clover. We think six quarts of clover-seed sufficient to the acre.

The oats, with this treatment, are generally a fair average crop, and the clover, soon after the oats are taken off completely fills the stubble, and the following summer should not be pastured, except by hogs after it is in bloom. Thus a great quantity of vegetable matter will be upon the surface for the next years' crop, which will be all you can wish. One important item I have omitted, which is 1½ bushel gypsum, sown broadcast to the acre, on the clover. This should be done in March.

Morris is rich in iron ore, which in both quantity and quality is unsurpassed. One mine of great value, is 300 feet deep, which, in a comparatively new country, is a deep hole. There is no doubt, I think, that the mines of this county could supply all the furnaces and forges in the United States. James Haines. *Chester N. J., Feb.* 18, 1847.

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Western Farming.—In your February number I noticed some extracts from Dr. Elliott's letters in regard to "Western Farming," and observed that the large farm of Mr. Strawn, or "Stron," of Morgan Co., Ill., is alluded to. The owner of that farm, a *Napoleon* among farmers, deserves a more extended notice than a few lines stating the size of his farm. It is indeed true that he cultivates from seven to eight thousand acres, and often winters three thousand head of cattle. But he is more than this indicates; he is an *original*, fashioned by nature's self. How, think you, is this vast herd of stock annually collected? At some city market, by a gentleman on horseback, with gloves on? Why, no, sirs! This same Strawn, in person, by day and night, scours the whole country for an hundred miles in every direction, to secure them. He often rides all night, and so rarely does he lodge more than four hours in a night, during his buying season, it is said by those who know him best, that although he carries large sums about him, the robbers never know *where* to catch him. To-day, or this evening, he is here, while to-morrow's first sun finds him fifty miles hence. He knows all the short cuts and by-paths of the country as well as your compositor knows his types.

Numerous are the tales that are told of his dispatch, his promptness, and his fairness in doing business. In the dead of night he has been known to rout a farmer from his bed, purchase his stock of twenty or thirty steers, and by daylight be purchasing forty miles from there. It is noted of him that his judgment is as accurate as it is rapid. As soon as his eye is fixed upon a drove of steers, his judgment is formed, his price is set, and the next minute it is offered. He never banters, makes no second proposal; but if the first is not accepted, goes further for his stock.

They who know him find no difficulty in dealing with him, for it is notorious that his offers are always made fully up to the value of the drove; and the manner in which he met the butchers of St. Louis, some three years since, was a corner worthy a Wall-st. broker.

The butchers had been buying beef at the low price of $2 per 100 lbs., on the hoof, when Strawn made his appearance with a drove of some size, and the market being now glutted, no one would offer him more than $1.50. He waited an entire day, but nothing higher was offered. The next morning, as usual, the butchers came out to purchase, but Strawn's cattle were still held at $2. They went to the other droves; they were sold. Who had bought them? Strawn, at $2. They sent into the country. Every drove they met was Strawn's. His buyers had been out all night, on every road from the city, and had bought all the cattle on their way to market, at $2 per 100 lbs. Thus were the butchers finally compelled to buy of Strawn and pay his price, $2.

Whether the blue grass *suits* our prairies, depends on what that word means. It is notorious that it encroaches in a great degree upon all prairie farms as they become older, and all our bottoms and lands adjacent to towns are more or less covered by it, until the white clover taking its turn, uproots and drives it off.

The prairie grass is good feed from the 15th April or first May to the 1st November. Then sheep need about a bushel of corn to the hundred per day, and will pick well enough at the roots of the grass until the 15th December to 1st January. Then they must be fed hay with grain, (I mean prairie hay,) as before, until the grass starts. During the winter, the prairie grass is so wiry as to be uneatable by any stock that I know of. I keep upwards of 2000 sheep, and have fed them in three different ways, viz., on prairie grass till the 1st November, then blue grass till 15th December; then a ton of hay and ten bushels corn per day to 1000, till 1st March; then blue grass and a bushel of corn per 100 till the 20th March; then blue grass alone till the prairie grass springs. The second mode is described above. and the third consists of corn and corn-fodder cut up at the root while glazing, and well cured. This, fed at the rate of three bushels per day to the 100 head, from the failing to the springing of the prairie grass.

This last I consider the most objectionable, as the first is the most advantageous method which I know of for this country. Winter lambs don't do well with us A Sucker in Suckerdom. *Ottawa, Ill.*, 1847.

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Canada Thistles.—J. B., of Oneonta, N. Y., gives us his mode of destroying Canada thistles. He says—"Salt them—use salt freely, and your cattle and horses will gnaw and stamp them to death. If some thistles appear the second year, repeat the process, knowing that the salt is not wasted if a little is 'trodden under foot of men' or of beasts."

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Action of Lime.—There is probably something not generally understood in regard to the operation of lime. Whether it promotes the fermentation of vegetable substances, is a question which has been much discussed. We would venture to suggest that in this respect its effect may depend on the state in which it is used. For instance, if it is taken fresh from the kiln and immediately incorporated with a mass of vegetable materials, and there slaked, would not the heat generated in slaking, bring on a fermentation, which, being once commenced, would pass through the heap?

In the (London) *Farmer's Magazine*, we find an able article on the "Theory and Practical Use of Lime," by John Towers, a well-known writer on agricultural subjects, and a chemist of distinction. The conclusion to which Mr. T. arrives in regard to the effect of lime on vegetable matter, is thus given:

"If applied to green vegetables *quite hot from the kiln*, it will destroy the tissue and carbonize the substance, itself being brought into a state of mild lime or chalk."

Some of Mr. Towers' other conclusions in regard to lime are as follows:

"According to high chemical authority, it is capable to liberate potassa from clay and granite rocks, and to set it at liberty from its combination with flint as an insoluble silicate of potassa."*

"It is a mistake to suppose that quick-lime renders vegetable and animal remains soluble. These substances are partially soluble as we have seen in the three alkalies; but the precipitate formed by the addition of lime is not soluble, or at any rate, it is so far fixed that it will remain long quiescent in the ground, from which it can only be taken up in very small quantities and by slow degrees, according to the capacity of the vegetable for such food."

The operation of lime was discussed at one of the weekly agricultural meetings at Boston, and the principal facts there brought out, agree with the theory of Mr. Towers.

Mr. Earle, (editor of the *Worcester Spy*,) observed that he thought lime was frequently misapplied; it was sometimes mixed with stable manure. He had himself taken half a dozen loads of manure and mixed a cask of lime with it, and he thought he had never seen so little effect from any manure. He supposed the lime must have united with the base of the ammonia in the manure and liberated it; it was thus lost. He spoke of the effect of lime on animal matter. "Quick-lime absorbs gelatine, and is then insoluble. When he was a lad it was a common practice to apply quick-lime to heal a cut in the finger, or other parts. In such cases you may soak this coating in water without effect; by uniting with the animal matter the lime is insoluble."

Mr. Porter, of Danvers, remarked that he had mixed a number of casks of lime with peat muck, and at the same time had mixed the same value of ashes with another heap of the same size. The heap which contained the ashes began to heat soon, but the one with lime in it remained cold. [It is not stated whether the lime was put with the peat before it was slaked.] Both heaps were spread on a potato field, but the result was much in favor of the one which contained the ashes.

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How to prevent the Bee-Moth or Miller.—Thinking it may be beneficial to some of your readers who keep bees, I will briefly give you my mode of managing bees for the five past years.

I have the interior of my hives of a size sufficient to contain about one bushel, and largest at the bottom. When the bees begin to work and increase in the spring, so that they need more room, I raise up the hive about three-fourths of an inch, by putting under a block at each corner of the hive, and then set a box on the back tight to the hive and bottom-board; also one on each side, with holes in the bottom edge of the boxes, to correspond with the holes under the hive, so that the bees can enter the boxes directly from the bottom board. In the course of two weeks I add two more on the top of the hive, making five boxes, which should contain at least as much as the interior of the hive, and exchange them as fast as they are filled. In this way the bees keep to work, so that there is none which lay on the outside of the hive; and I find that in a good honey-making season, they will fill the five boxes about as soon as they will two on the top of the hive. In this way, I have a hive and boxes that contains two bushels or over, and I find that the colonies will increase enough to occupy a hive of this size as well as they will a one bushel hive, and when the bees begin to decrease in the latter part of the season, I begin to remove my boxes, and so continue to do until I take them all away, and let the hive down to the bottom board again.

I never have known of a swarm of bees being destroyed by the bee-moth if the hive was kept full of bees, to guard the comb, and this cannot be done in any other way than by taking away the room and comb as the bees decrease, so that the bees will be numerous enough upon the comb to keep the moth out in the spring and fall. If I want my bees to swarm, when they have increased enough to spare a swarm, and leave enough in the old hive to guard the comb and perform their labors, I remove all the boxes, and let the bees all into the centre of the hive, and I have never had them fail of swarming within two days after, if the weather was good. I then return what boxes they need, and so add the boxes as the bees increase. But it is rather inconvenient to manage them in this way, unless your hive is rightly calculated for it. A. Colton. *Pittsfield, Vt., April* 6, 1847.

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The Barberry Question.—We have received several communications in reference to the influence of the barberry in blighting grain. We wish to treat all our correspondents with perfect fairness, but we cannot think the interest of the public would be promoted by a farther discussion of this subject in our columns, and we are therefore under the necessity of disposing of the articles on hand by the following summary:

In our number for December last, we gave a communication from Mr. J. G. Clarke, of Kingston, R. I., in which the theory set forth in reference to the supposed blight of a field of rye by the shrub—is "that the barberry and the rye were in blossom at the same time, and the pollen of the barberry was blown by the wind on the open blossom of the rye, thus causing blight."

Mr. Samuel Hayden, of Windsor, Ct., sends us a communication in which he says—"My opinion is, and has been for years, that Mr. Clarke's theory in regard to the blight taking place through the influence of the pollen, when both [the grain and the barberry,] are in blossom at once, is correct, and that to produce the greatest amount of mischief the wind should be in the right direction at the proper time," &c. He then cites several cases which he thinks support this theory. But is it a settled point that the barberry and rye or wheat, do, ordinarily, come into bloom at the same time? A correspondent, who is an excellent botanist and a close observer, writes us—

"Now, the fact is, the barberry is out of flower several weeks before either rye or wheat comes into blossom; and the pollen, thus clearly proving an *alibi*, is fairly entitled to an *acquittal*."

From Mr. S. Baldwin, of New Haven, Ct., we have a very elaborate and well written article, which we should be pleased to give in detail, did not the rule which we have thought proper to adopt, oblige us to exclude it. In a very interesting manner, he gives the results of his observations for a period of more than seventy years. He refers to an article written by the late Dr. Dwight, President of Yale College, written in answer to some queries which were propounded in 1800, by the "Connecticut Academy of Arts and Sciences," with a view to procuring materials for a statistical history of the state. Dr. D. states that in 1796, the town of New Haven appropriated $200 for the purpose of destroying barberry bushes within its limits, and that individuals are supposed to have expended as much more. This, it is stated, was done, because from examination, the evidence that the bushes had an injurious influence, was deemed conclusive. It was supposed by Dr. D., that the blight was occasioned by the wind carrying the "effluvia" and the "decayed blossoms" over the field; and he states that wherever they fell, the grain was blasted.

As a further evidence that the idea of the deleterious influence of this shrub has long prevailed, Mr. Baldwin cites a statute of Connecticut, passed in May, 1826, by which provision was made for the eradication of bar berry bushes. This act, he informs, us, "is still in force, substantially, as originally enacted." Mr. **Hayden**, in his communication before spoken of, also alludes to this act.

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* Dr. Dauben observes that "quick-lime, mixed with pounded granite, speedily liberates the contained alkali, and as many of the clays and clay-stones, which compose the bulk of several rock formations in secondary and tertiary districts are derived from granitic rocks, we cannot doubt that the action of quick-lime upon the latter would be of analogous description."

The final conclusion of Mr. B., is, that—"the barberry will sometimes produce blast upon wheat and rye; particularly when at a critical time, a favorable wind shall carry the strong effluvia from the blossoms of the bush directly upon the grain. At other times it may be harmless."

Some of the cases cited by Mr. **Baldwin**, are singular enough, it is true; but if blight in the cases was actually caused by the barberry, why has it not produced the same effect in other instances, where, for aught we can see, the same causes existed? We have several times known grain to be as much exposed to the influence of the barberry as in any of the cases referred to by Mr. B.,—the bushes growing in full vigor, blossoming, and bearing fruit, yet no ill consequences occurred, the grain being perfect.

Mr. **Warren Hecox**, of Skaneateles, in the 7th vol. of the Cultivator, p. 175, states that for the purpose of testing this question, he transplanted a barberry bush to the midst of his wheat field. In relation to the result, he speaks as follows:

"On my wheat ripening, it proved a good crop of plump wheat, and no way injured by the barberry in any part; *the heads of wheat which shot up in the top and among the branches, some of which rested or lay reclined on the leaves of the bushes, were equally plump and good as any in the field.* The bush was green and thrifty. Some of the branches or limbs had grown ten or twelve inches; there was a sprinkling of oats in the wheat, some within five feet of the barberry, as plump and good as ever I saw. There was an acre of barley in the same field, twelve or fifteen rods distant, as good and plump as any I ever had. My neighbor's field of winter wheat, only twenty-five rods distant, not at all affected or injured, but plump and good."

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Chester County Pigs.—I send you the weight of some hogs of the Chester County breed, so called, which have been in such great demand in Pennsylvania and New Jersey, and some of which have been sent to a great distance. Franklin Comly, Esq., slaughtered one on the twenty-fifth of February, which weighed 678 pounds; William S. Doran slaughtered one in January, which weighed 640 pounds; William Janney slaughtered one in February, which weighed 704 pounds; and Levi Buckman, Esq., slaughtered one March 1st, which weighed 707 pounds; making an average of 682 pounds each. Those hogs were kept for breeding purposes, and not for making *brag* hogs. The three first were not altered until the spring service was over, and the last one was a breeding sow which raised a litter of pigs in August last, after which she was fed moderately until she was slaughtered.

But the question will arise in the minds of some, whether such large hogs are the most profitable to the farmer. Some would say not, and my own opinion is that a smaller boned hog, that would not be near as great a consumer, and which would weigh from three to four hundred pounds at fifteen months old, with ordinary care, would be of more profit to the laboring class of community than the larger breeds. For instance, the Chester county "grass hogs," which have been in great demand through Chester, Philadelphia, and Bucks counties, will, with proper care through the winter,—with an allowance of two quarts of corn per day to each pig that would dress one hundred pounds, keep fat enough for the knife at any time from two months to eighteen months old, and with such treatment will weigh from three hundred to four hundred and fifty pounds at the above age. They are all pure white, short legged, with small head and ears, and of as handsome form as the Berkshires. **Ploughboy.** *Newton, Pa., March* 22, 1847.

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Depreciation of Lands in Western New-York.—For some years past, improved farms in several of the western counties of this state, have been offered for sale in large numbers, and at surprisingly low prices. To sell out has been the all-pervading desire among farmers, and seldom have they let an opportunity pass without embracing it. Their places have generally been supplied by Germans, who now constitute a considerable portion of the population of Niagara, Erie, and Chautauque counties. During every month of the year they are flocking here from Europe, and spreading on every side. In one town, where ten years ago there was a flourishing and homogeneous community of yankees, constituting a large congregation with a settled pastor, the Germans have displaced nearly every family, and have now the entire control.

The reasons for this general emigration are various, but I will name three that have had much influence.

1. The original settlers in these counties purchased their lands of the Holland Company, mostly upon a credit; and as they began in debt, and had to clear a dense forest, and support their families, they continued in debt, and were likely to thus continue, unless they could sell out their improvements.

2. The boundless and fertile prairies and wheat lands of the west were in various ways brought to the view of their imagination, and made an object of strong desire.

3. The facilities of lake navigation have, in effect, nearly equalized the value of very large portions of government land at the west with the improved farms of this state. To show how this is effected, let us consider the single article of wheat—the article from the sale of which most farmers expect to become rich. It is ascertained that the prairies at the west, which may be plowed and sowed to wheat the first year that they are taken possession of, will yield, on an average, about twice the number of bushels per acre, that can be realized from the lands in Western New-York. That wheat, when carried to market, obtains nearly as high price as is given here. The difference in price arises principally from the charge of freight through the lakes.

From the western end of Lake Erie, say from Detroit, Toledo, and Sandusky, the charge per bushel for bringing wheat to Buffalo, is from 3 to 5 cents; and from the western and southern shore of Lake Michigan, as Milwaukie, Racine, Southport, Chicago, and Michigan city, the charges for freight are from four to twelve cents per bushel,—eight cents being about the average. During the summer, between the hurry and crowd of spring and fall navigation, wheat is brought from those ports to Buffalo at the lowest rates. This shows at once the value of lands in that region. If land in Michigan, Wisconsin, and northern Illinois, and Indiana, costing but $1.25 per acre, will yield from 25 to 30 bushels of wheat per acre, and that wheat will sell for as much there within a few cents, as in Buffalo, it is no wonder that farmers are anxious to sell out here and remove thither.

But, the inquiry may be raised, "are not farmers there obliged to carry their wheat a long distance before they reach a market?" Not farther than multitudes who live in this state. Many bring wheat and Barley to Buffalo from places 20 to 30 miles distant; and apples, potatoes, pork, butter, cheese, oats, lumber, &c., are brought here by wagons from 40 to 60 miles. In northern Illinois and Wisconsin, farmers generally find a market for their surplus produce much nearer home; though at Chicago, where 400 wagons are sometimes seen in a day, loaded with wheat from the country, some of them come a distance of 40 miles or more. Agents are stationed there as well as here to make large purchases of wheat for eastern manufacturers, and there is no reason why it should bear a higher price here than there, except the freight through the lakes.

The above are some of the reasons why the population of western New-York has changed within a few years, and why land has been depreciating in value. That this depreciation must become general seems almost certain. Western competition is too strong for us; we shall be compelled to submit to harder work and poorer returns, or to gather up our effects and launch out in search of a western home. H. A. P. *Buffalo, Jan.* 1, 1847.

[NOTE.—We hope the farmers of the " Empire state " will not be frightened by our friend's opinions and predictions. If our lands are properly managed, there is no danger to be apprehended from western competition. We think our correspondent over-estimates the yield of wheat on the prairies, as compared with that of the wheat lands of western New-York—we do not agree to the statement that the former will produce " on an average about twice the number of bushels " of the latter. Instead of the yield of wheat on the prairies being so great as is estimated, " the first year they are taken possession of," we had supposed it was generally less than the average of our good wheat lands. And as to distance of transportation, we think it is more against the farmers of the western states than is allowed. If it had been said that they were frequently obliged to transport their wheat from 60 to 100 miles, a more correct idea of the facts would have been conveyed. These remarks are not made to disparage the west, but to correct what we believe to be an error, viz, that the farmers of the east should remove to the west to avoid an injurious competition. It is admitted, however, that there are circumstances which may render it expedient for an eastern farmer to emigrate.—EDS.]

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PREPARATION OF SEED WHEAT.—I have of late been reading in the Cultivator and several other papers, accounts respecting the preparation of seed wheat. Some use salt and lime, but in different ways. I practiced using salt and lime for that purpose for about thirty years, but in a different, and I think a better way than I have seen described. My method was this: Take, say, a bushel of wheat, put it into a tub, and take from two to four quarts of well slaked lime, and one-half pint of salt; put them into a kettle with water sufficient to wet the wheat. Boil it until the salt is dissolved. Then turn it on the wheat, while boiling—the hotter the better, stirring the wheat continually until all is besmeared. Do not pour in so much as to have it stand in the bottom of the tub. Let it stand from 24 to 48 hours, without stirring; then sow it. It is an infallible remedy for smut, and will increase the product enough to pay all the expense.

CARROTS.—I will say a few words about carrots. My story beats all the stories I have heard; but old men are apt to tell large stories, and I am betwixt 80 and 90 years of age. But I am able to prove what I state. Some twenty years since, I undertook to raise carrots, and finding it profitable, determined to pursue it; but about that time I lost my health, and my son took the farm. There was nothing more done about it until 1845, when he sowed a piece, some with white and some with orange carrots, and when we dug them we measured the ground and the carrots, and the yield was at the rate of 1,800 bushels to the acre, and the weight over 42 tons. JONA. WHITNEY. *Tunbridge, Vt., April* 24, 1847.

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YIELD OF BUTTER.—I noticed in the Cultivator for 1846, p. 157, an account of the yield of butter from a dairy of ten cows, being an average of 211¾ lbs. to each cow. I kept in 1845, four native cows, which constituted my whole dairy. Three of them were of middling quality as milkers, and the fourth one was below middling. From these four cows I fattened two calves killed at four weeks old, and reared two other calves on the milk of the cows. We made during the season 1056 lbs. of butter, besides furnishing milk for a family of eight persons. This would be an average of 264 lbs. to each cow. The cows were kept as follows: In winter they were fed upon hay, generally three times a day, in some of the coldest weather five times a day. The hay, in the coldest weather was not always of the best quality. They ran when they pleased to a large stack of wheat straw in the yard. They were not stabled, but had an open shed for shelter, and no extra feed was given them except a slop once a day after calving, till turned to grass, of mill-shorts. My pasture was good. It consisted of about five acres; the feed a beautiful mixture of early clover, timothy, and some of the finer grasses. It had a light top-dressing of plaster early in spring. The cows were kept in this pasture, with the exception of a few days, till late in the fall, though the drouth was such that our mowing fields produced but little after-feed. The pasture had a good running brook crossing one corner. Other stock was turned in and withdrawn as occasion required, to keep the feed about right. I would not pretend that this dairy product cannot be beat, but I think it is a good yield considering the feed, and that the cows were small, and not high bred. J. WILSON. *Salina, N. Y.*

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SOILS WHICH RUN AND BAKE.—Reading in the Cultivator of 1846, I met with an inquiry on page 110, about soils that " run and bake;" and not having found an answer to that question till now, I will try to answer it, as far as I am able by my experience in Germany.

It seems to me there are three points for consideration: The nature of the soil, the crops fit for its cultivation, and the manner of this cultivation. Soil that runs and bakes, is in Germany, and probably here also, a heavy clay, with an impenetrable subsoil; color generally black when moist, and light grey when dry.

The crops raised on such soil ought to be wheat, oats, and red clover. Only mixing this soil with lighter soils, with sand or muck, can make it suitable for the cultivation of roots and barley. I have no experience how Indian corn will do on it.

Wheat may follow after a thorough fallow and four or five times plowing, and after a half fallow on clover stubble. Oats can follow wheat and the clover be sown with the oats. A division of the field in three parts, and a rotation of fallow, clover, wheat, and oats, will prove expedient, it not being prudent to raise red clover every third year. Breaking up the stubble of oats in the fall, with a common plow, not very deep, then cross-plowing very deep before winter with the subsoil plow, repeating the last named operation during the next season, as often weeds are running up, plowing only when the soil is in middle condition, not too wet, and not too dry, using harrow and roller before each plowing, will render the soil mellow and fine, and insure a good crop of wheat.

The right time to plow this soil, is when, after some dry weather, there follows a good rain during night. Then the farmer ought to bring all his forces to the field, and harrow the whole, if possible, before noon, with a strong harrow, and after the noon sun has dried the ground, roll it. If it does not rain again, and the weeds spring up in good number in a short time, it may be plowed any fine day. If the field is to be manured with stable manure, this may be plowed under at the second plowing, before winter, but not with the subsoil plow.

If the wheat follows the clover, then plow the clover stubble under in August, after the second clover crop, then cross plow with the subsoil plow in September, and sow the wheat on this furrow. For oats, the wheat stubble wants to be plowed under, not deep, as soon as the wheat is harvested, and the ground should be cross-plowed before winter with the subsoil plow, and if the land is generally wet, in small beds of 16 to 20 furrows. In spring, as soon as the frost is out of the ground, sow the oats.

A farmer who has only this kind of soil, wants more teams and plows than the farmer owning another kind of soil; to be able to perform a great amount of plowing in a given time. Then his chance to plow with success is within narrow limits. He must provide other work for his team, to use it to his advantage, when the ground will not admit of being plowed.

In general, I wish to see the subsoil plow more used in this country, knowing its superiority in every respect by experience. **Wm. Wallis.** *Toledo, Ohio, March* 28, 1847.

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Cutting Timber.—In the March number of the Cultivator for 1846, is an article relating to woodlands. The writer says he "had the presumptive folly to cut several trees of this timber, [chestnut,] in the freezing and thawing month of March," and that "not a single sprout ever sprung up," &c. Now it happened that we were cutting chestnut timber, (which was frozen hard,) the 7th of March, and had just felled the last tree when we received the Cultivator. On reading the piece referred to, we felt sorry we had not cut it earlier, as it was a piece we wished to have sprout and grow up again; but what was our disappointment to find that they sprouted in due time, and grew from eight to ten feet in height the same season. It seems the result was opposite to the one referred to. What could make the difference? **Agricola.** *Enfield, Ct., March,* 1847.

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Soiling Work Horses and Oxen.—Whatever may be the decision in regard to the expediency of soiling milch cows and growing stock, we think there can be no doubt as to the propriety of keeping up work horses and oxen, in all situations where they are required to labor constantly. The advantages are, first, a saving of time. When the animals are turned to pasture, considerable time is unavoidably occupied in driving them to and fro to be yoked or harnessed. Second, it is better for the stock, they have more time to rest, are more uniformly supplied with food, and are in better condition to labor. Horses are liable to *slaver* when running at pasture, especially the second growth of either red or white clover; and from this cause they frequently become unhealthy and poor. By keeping them up this is avoided. If it becomes necessary to feed clover of the second growth, it should be dried or wilted, and some clean dry straw or old hay cut and mixed with it. Third, the quantity of manure that may be made by keeping the animals up, will more than pay the extra labor in bringing the food, &c. Let a due supply of muck or materials for absorbing the urine, be daily used in such a way that none shall be wasted.

Until green green food can be had, the best of hay, with a little meal, or grain in some form, should be fed. Rye, cut while it is tender, may be first used; clover may come in next, and the different grasses afterwards. Rich, moist ground, properly swarded, will throw up such a rapid growth that it may be cut five or six times in the season.

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Farming on Thirty-Five Acres of Land.—J. G. Chadsey, of Wickford, R. I., states to the officers of the Rhode Island Society for the encouragement of Domestic Industry, that several years ago he purchased thirty-five acres of poor land, for which, it being near the village, he paid the large sum of three thousand and fifty dollars. Only twenty-five acres of it are "tillageable, including three acres of meadow not plowed. The remainder is made up of hills and holes, marsh, and beach, with a small strip of wood-land." The arable land is described as uneven, with a gravelly soil, much encumbered with small stones. It had been much worn down by repeated croppings without manure. He let it on shares, but got such poor returns that he was sick of his purchase. Finding that he could neither sell nor rent it, he came to the conclusion to try farming himself, though he had "*done nothing at it for nearly forty years:*" but as a "substitute for experience," he says he took an "*agricultural paper.*" He began cultivating it himself in 1840. He divided the tillage-land into six fields, "from three to four acres each, a new one to be taken up every year, and after taking off three crops, let it lie three years in grass." About two were appropriated to root crops and garden vegetables, which are plowed every year.

His success has been such, that land, which seven years ago, would not rent for four per cent., ***now pays twenty per cent., after deducting all expenses.*** He makes the following statement in regard to the products and profits of his farm for the year 1846:

10 acres mowing, 19 tons hay, at $12,......		$228 00
3 acres corn, 124½ bushels sound, at 80 cts., and 9 bushels offal, at 40 cts.............		103 20
Corn fodder, $25, and pumpkins, $4.50,.....		29 50
3¾ acres rye, 77 bushels, at 80 cts., and straw sold, $24.81,.........................		86 41
2¾ acres potatoes, 348 bushels, at 37½ cts., and 50 bushels small, at 20 cts.,..........		140 50
367 bushels onions, at 50 cts., ...	$183 50	
836 do. carrots, nearly all sold at 19 cts.,........................	158 84	
48 do parsneps, do., at 33⅓ cts.,...	16 00	
6 pounds onion seed, and 3 pounds carrot seed,....................	8 00	
Peppers and sage sold, ...	41 88	
Produce of 1 acre and 125 square rods,.....		408 22
½ acre summer vegetables, mostly used in family—sold, ...		7 69
Salt grass sold, standing,................		24 00
Milk sold, ...		47 39
Rent received for two gardens,............		6 50
Milk, butter, and summer vegetables used in family,...............................		35 00
		$1116 41
Expenses.—Paid for labor,.......	$182 62	
Board of labor, ...	90 00	
Molasses for drink, 20 gallons, at 30 cts., ...	6 00	
Manure purchased, and materials for the same,.....................	81 46	
Seeds of different kinds,...........	28 77	
Wear and tear of farming utensils,.	25 00	
Taxes, ...	11 81	
Labor done by myself,............	50 00	
Cost of cultivation, ...		475 66
Cost of land, $3050; profits 20¼ per cent for use of land,........................		640 75

Mr. Chadsey states that he hires all his help except the "little" he does himself. He states that he made 917 pounds pork, and 560 pounds beef, which are not included in the account, as they were fattened on part of the produce before estimated. His stock, he says, consists of two cows and a horse. He buys manure from the village. With the horse, he does all the "team work" except breaking up the land. His products for the year 1845, amounted to $913; his expenses were $368; profits $555.

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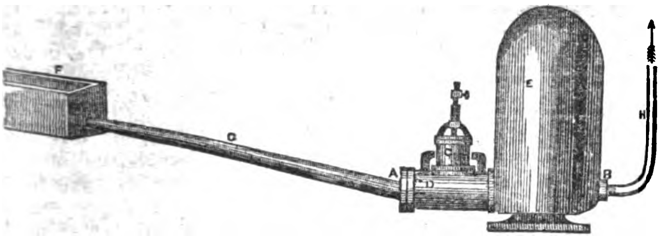
Farnham, Brown & Co.'s Hydraulic Ram.—Machinery for raising water has been known for a



Hydraulic Ram.—Fig. 31.

long time; it is not, however, till within a comparatively short period, that an apparatus having a self-acting power has been brought into use. The machine invented in 1796, by **Montgolfier**, a Frenchman, is believed to have been the first of this kind which was very extensively adopted. Since that time, several patents have been taken out both in England and this country, for inventions designed for this purpose.

The machine above represented, is thought to be one of the most simple and effective that has been used. In reference to it, the manufacturers say—"it costs but little, and is never out of order. Any spring, or small stream, affording a fall of from one foot to ten feet, may be used to elevate a portion of the water, and thus a fountain of water be secured at the point required." The height to which the water can be raised, is estimated at thirty times the fall. The following rule for calculating the amount of water which a machine will raise in a given time, is taken from a communication by H. P. M. **Birkinbine**, in the *Farmers' Cabinet*.

"Measure the amount of spring or brook discharges in a given time. Ascertain the greatest amount of head or fall that can be obtained, and the elevation to which the water is to be raised. Then divide the elevation by the head or fall, and the amount of water by the quotient. Deduct thirty per cent. from this result, and it will give the amount delivered in the given time. For example, suppose an elevation of 60 feet, with a fall of 5 feet. The supply 4 gallons per minute, or 5760 gallons per day:

Then $\frac{60}{5} = 12$; then $\frac{5760}{12} = 480$: and 480 — 30 per cent. = 336 gallons raised per day."

If the machine is properly made and put up, it is said this rule may be depended on.

Explanation of the Cut.—*A, B, C, D, E*, the ram. *F*, spring. *G*, pipe from spring to ram. *H*, pipe conveying water to house or barn.

The machine above described is manufactured by **Farnham, Brown & Co.**, Philadelphia, and is for sale at the **Agricultural Warehouse**, Albany—price $25.

* * * * * *

Sheep Husbandry.—Many farmers in this section are convinced by actual experience, that there is no crop which we raise at so little expense, and is of so much value to feed to sheep, as carrots. Sheep fed on them will attain a better size, and are more healthy than when fed on grain. Aside from hay, we feed nothing to store sheep in winter so well adapted to their wants, as this vegetable. Half carrots, with grain, is better than all grain for sheep or horses, to fat them. Several thousand bushels were raised in this county last season, for the purpose of feeding sheep, and I presume the quantity will be doubled the coming year.

With us, we make it more profitable to raise sheep than cattle; even when we sell our wool as low as twenty-five cents per pound, the average profits on sheep exceed those on cattle. In fact, I was about to say that the income from the sales of the *increase* of our sheep about equalled that of cattle, aside from the wool. The common flocks of this district yield annually about three pounds of wool per head. The annual average price of store sheep is over one dollar per head; fat sheep over one dollar and a half. The sales of our wool occur every year; our cattle once in two or three years. For instance, we keep our calves till they are three years old, then sell them in the fall. From our sales we lay out one-fourth, or one-third of the money to re-stock.

The wealthiest man in this state, once remarked, as as we were discussing the relative merits of raising sheep or cattle, "that some of our graziers did not see the difference between an *annual* income, and income once in *two* or *three years*."

Another farmer who lived in this town, with the exception of three or four years in about fifty, sold his wool invariably for twenty-five cents per pound. In the meantime,his flock averaged about 550, and stock of cattle over sixty. His two year old cattle sold at from $10 to $12; three years old, from $17 to $20. I have frequently heard him say that his clean and easy money was made on his wool—that the cattle cost all that he got for them; the growth and increase of the sheep nearly paid for their keep.

If we bring into the account the improvement of our farms, to stocking either sheep or cattle, we must place the credit on the side of sheep.

The pure descendants of the Spanish Merinos are undoubtedly the most profitable sheep that we have. They yield a more abundant return of wool in comparison to what they consume, than any other breed. They are more robust and hardy. They withstand our northern winters, fed at hay stacks, without any covering above them except the broad heavens, and will range on shorter feed in larger flocks, and keep in good condition, when other breeds would pine away.

Before I end this sheepish chapter, allow me to give you a brief computation on the value and relative merits of two flocks of sheep, one of them the common variety, yielding wool equal to the common average, say three pounds per head; the other flock may be considered pure bred Merinos, and yielding an annual average of four and a half pounds, on the same keep. A. and B each commence with a flock of 100 young breeding ewes; each flock produces annually ninety lambs, for nine years. The *increase* from the lambs we leave out of the account.

Mr. A.'s flock of 100 ewes in 10 years, yields 3,000 pounds of wool, at 3 lbs. per head. Their lambs, in nine years, number 810, which yield 4,050 fleeces, or 12,150 pounds of wool, in nine years; allowing thirty cents per pound, A.'s wool brings, ...	$4,545.00
Mr. B.'s flock of 100 ewes, according to the same calculation, at 4½ lbs per head, 22,725 lbs., at 30 cts., is..............	6,817.50
Making a profit in B.'s flock over A.'s, of.. in wool only, not including interest.	$2,272.50
If we value B.'s lambs worth only one dollar per head more than A.'s, we allow B. nine hundred dollars *extra in lambs*, in ten years, ...	900.00
Which gives B. the advantage over A. of more than *three thousand dollars* in 10 y'rs.	$3,172.50

In this computation I have given no credit to B. for the extra price that his wool brings in market over A.'s. Pure Merinos will live and propagate about one-third longer than the common sheep of our country.

I will close in hope that some wool grower who may chance to read this chapter on sheep—one that has been in the habit of saying "that he never learned anything in an agricultural paper," will be so far stimulated as to improve his flock of sheep enough in ten years to realize the extra sum of ten dollars, and spend the same for agricultural papers. S. W. Jewett. *Weybridge, Vt., March* 29, 1847.

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Heaves in Horses.—I have a horse that has been troubled with the heaves for several winters; and his cough was sometimes so severe that it was painful to drive him even on short journeys. By careful treatment, however—chiefly by withholding from him *clover hay*—he entirely recovered, though relapses readily occur. A few weeks ago we drove him on a visit to some distant friends; he was in fine condition; but on our return he began to cough very severely. Probably he had eaten something wrong the night before. Again he was fed on clean timothy hay, and though no medicine was administered, we heard no more of it in a few days. For a horse in this condition we consider hay from a *stack* much better than hay from a *mow*, as the latter is very apt to be dusty.

P. S. Since the foregoing was written, it was most convenient to feed him for a few days with hay made of *clover* and timothy which grew together, when he began to cough again, (though not with a tenth part of his former frequency and violence,) yet the clover when cut was not past its bloom, the leaves bright green, and all cured without rain. I would therefore ask if *clover* has not some specific action in this disease? D. T. *Cayuga co., 3d mo.* 10, 1847.

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Wild Potatoes.—In an address pronounced by Dr. Mitchell before the New-York Horticultural Society, in 1826, mention is made of some wild potatoes, which were sent by Dr. Finslar and Commodore Hull from the coast of Peru in South America. Dr. Finslar, in a letter dated Dec. 10, 1825, to Dr. S. L. Mitchell, says, "I send for your gratification, some of the original potatoes, so long sought for. These potatoes were found growing in their native state, on the top of the island of St. Lorenzo." Commodore Hull, in a letter dated Lima, 27th August, 1825, to Commodore Chauncey, says, I forward you a small box containing what we believe here to be the wild potato. I found it last year on the top of the island of San Lorenzo, in the bay of Callao. About six months ago, I sent to Baltimore some of them, with the small ball on the vines, directed to Mr. Skinner, and requested him to send part of them to Mr. Sewell, of Boston." In another letter he describes them as being "very fine." When boiled they are yellow, and of a good flavor." Dr. Mitchell says he had sent a parcel of the roots to the Hon. Josiah Quincy, who had distributed them among some of the ablest cultivators at Boston.

Now, my object in this communication is, to ascertain what has become of these wild potatoes?—what success has attended the cultivation of them? Can Mr. Skinner or Mr. Quincy, or any other person give any account of them? I can find no account in any publication subsequent to 1826. Perhaps some members of the American Institute can give the desired information; if so, will they favor the public through the pages of the Cultivator? H. A. Parsons. *Buffalo, April* 25, 1847.

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Letting Sheep.—A correspondent in your April number, wishes to know something about the terms of letting sheep. What may be customary in other parts of the country I cannot tell, but in New-England and New-York, sheep are frequently let for a term of years, on the following terms, viz: The owner of the sheep to have *half of the wool*, and *all of the increase*; and at the end of the time, have restored to him the original stock, or their value. This gives to the other party, for the use of his land and his attendance, only *half of the wool* from year to year. This, at first sight seems an inadequate remuneration, and yet there are farmers who readily take sheep to keep on these terms. If seven sheep, as is generally allowed, consume a ton of hay in a winter, or in 135 days, which is about the average length of our winters;—the pasturing in the other parts of the year, together with the care, attendance. &c., would bring the expense up to $1.50 per head. How, then, can any farmer afford to keep sheep for half of the wool? Another way of letting sheep, practiced somewhat extensively, is to double the flock to the owner once in three years.

It may not be out of place to remark, that in the manufacture of wool, cloth-dressers give one yard of dressed cloth for 2¼ lbs. of wool; one yard of white flannel for 1⅝ lbs.; and one yard of colored flannel for 2 lbs. of wool. ...... H. A. P.

Poll Evil.—I noticed a very simble cure for the poll evil in your paper some time ago; that is to wash out the sore and apply common salt. We have a good horse that had it for two years. I doubted the simple remedy, but resolved to try it, thinking it could do no harm, at least. However, the horse soon got well. and is now as sound as ever. John Miller. *Thorton. Ill., Feb.*, 1857. ......

Salve for an Inflamed Sore.—Half dozen Balm Gilead buds, pounded fine, one tea-spoonful honey, and the yolk of an egg; mix together and thicken with rye flour to the consistency of paste. I applied it once a day two or three times. I have used this salve with much benefit to allay inflammation in animals caused by castration. I saved a hog by it, and it is said to be equally as good for a horse. D. W. G. *East Dorset. Vt.*

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Fine Corn Crops in Ohio.—The following facts appear in the Report of the Ross County Ag. Society, gleaned from the published statistics which were collected with much care:—In liberty township, the whole amount of the corn crop last year, was 193,704 bushels. from 3,044 acres, or at the average rate of about 48 bushels per acre. The best lot of corn in the township was 40 acres, rated at 90 bushels per acre. The wheat averaged only 10 bushels per acre. and the best lot only 20 bushels per acre.

Gypsum on Stable Floors.—Many readers will remember the recommendations a few years since. to sprinkle stable floors with gypsum. for absorbing the escaping ammonia. Several papers contained statements that this practice has caused the speedy decay of the plank of the floor. No satisfactory explanation has been given of the cause. Is this result general?

BREAK THE CRUST.

Every observant farmer must have noticed the crust which forms on the surface of newly stirred soils, after lying a few days to the action of the dews. A much heavier crust is formed by each shower of rain which falls. Good and successful cultivation requires that this newly formed crust be often and repeatedly broken by the hoe, harrow, or other instruments.

A striking instance in proof of the importance of this practice, has just been stated by an extensive farmer. He planted a field of broom-corn, and by way of banter. told the man who assisted him, that each should choose a row as nearly alike as possible, and each should hoe his row, and the measured amount of crop on each should be the proof which was hoed best. Our informant stated the result in substance as follows:—"Determined not to be beaten, I hoed my row, well, once a week, the summer through. I had not seen my assistant hoe his at all; but had observed that for a long time he was up in the morning before me. At length I found him before sunrise, hoeing his broom-corn, and I asked him how often he hoed it;—he answered, "Once a day, regularly." The result of the experiment was, his row beat mine by nearly double the amount." T.

DOMESTIC ECONOMY.

Domestic Wine.—We have received from a gentleman whose name we regret we are not at liberty to mention, a sample of wine, being a part of his own vintage. The grapes were the Isabella and Black Hamburgh varieties, and the wine was made in imitation of champagne, which it closely resembles. We have been obligingly furnished with the recipe by which this wine was made, which we publish, in the hope that it may be useful to others:

"The recipe for making this wine I took from some agricultural paper. The process of its manufacture was simple, and is as follows: The grapes were about one-third Isabella, and the remainder Hamburgh. They were well ripened, and were put into a clean barrel and pounded till thoroughly mashed. They were put into a cullender and pressed with the hand till the liquid was separated from the pulp. The juice was then strained through a fine sieve, and put into stone pots, and allowed to stand five or six days, frequently skimming the impurities from the surface. After standing as above stated, 17 pounds of refined crushed sugar was added to 8 gallons of juice, and the whole stirred till the sugar was dissolved. It was then allowed to stand in the stone pots 36 hours, still skimming the impurieties as they rose to the surface. It was then put in bottles and allowed to stand twenty-four hours before corking; after which the bottles were well corked—the corks cut close to the bottle, and the muzzle of the bottle dipped into melted sealing-wax, so as to exclude the air, and the bottles were then put in the cellar."

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To Preserve Eggs Fresh.—Turn water upon unslacked lime, in quantity sufficient to cover the lime. In a short time a scum will rise upon the surface. Then drain off the whole water, and add fresh, and repeat the operation until no more skum rises. Stir up the lime and water, aud put in your eggs, so that they are completely covered. This wholly excludes the external air, and preserves them in the finest order. I have now eggs which have been kept in this way eight months; and on being broken, cannot be distinguished from those which are fresh layed. A lady who gave me the receipt, stated that she had preserved them perfectly good in this way for two years. The repeated saturations with water seems necessary to destroy the too great causticity of the lime; otherwise its strong affinity for the carbonate, the material of the egg shell, causes its decomposition. J. B.

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Preparation of Coffee.—Coffee, when properly prepared, is a delicious and nutritious beverage; but judging from that which we frequently meet with, the best modes are seldom practiced. In *Silliman's Journal*, we find a notice of a memoir on Coffee by the distinguished French chemist, M. Payen. The results brought out by his chemical researches agree exactly with facts previously known in regard to this article. A great error in the preparation of coffee, is that it is *burned too much*, by which the liquid, when it is brought to the table, is destitute of agreeable flavor, and has a bitter, unpleasant taste. The reason of this is shown.

"Coffee roasted only till it becomes slightly red, preserves the maximum of weight and of aroma, but gives out less coloring matter. In this state, 100 parts are found to have lost 15, while 100 vols. have increased to 130. Roasted to a chestnut color, as is commonly done, the loss is 20 per cent., while the increase in volume is from 100 to 153. This swelling of the grain depends upon the property which the nitrogenous matter deposited within the tissue has of puffing up remarkably when heated.

"If the heat is continued until a dark brown color is produced, and the grain is covered with a sort of glaze, the loss is twenty-five per cent., while the original quantity of nitrogen, 2.45 per cent., is reduced to 1.77, being a loss of one-fourth."

The soluble matter was also found to be much greater in the coffee subjected only to a low degree of burning—the brown giving 16.15, the chestnut-colored 19.00, and the red 25.00 per cent. The difference in "the aroma," it is added, "being nearly the same, the lower degree of roasting will produce not only the best and most nutritious beverage, but one free from the harsh and bitter flavor caused by the action of too high heat upon the nitrogenous matter."

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Milking.—I am much pleased to see that "Mary" and "Ann" have given their experience in churning butter, and beg to inquire if they do not think there should not be more care and cleanliness used in milking than is generally. The bag of the cow and the teats cannot well be clean when the cow passes much time in the yard, and the milk must catch many hairs and particles of dirt.

The udder might easily be washed with a cloth and cold water, which, besides the cleanliness, would be much better for the cow. I should like to know what farmers' wives and daughters think upon the subject. **Queens County.**

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Preserving Tomatoes.—A correspondent of the Cultivator, in a late number, intimates that preserving tomatoes is a humbug. Doubtless untried experiments may be frequently published. But we should always remember that a single failure does not prove that success is impossible. I have known persons fail repeatedly in making soda biscuit, and give up in despair; and yet afterwards become accustomed to the process so as to make soda biscuit with more ease and certainty than any other kind of bread.

My wife has been in the habit for several years, of putting up tomatoes for winter use, and has kept them good for a year and a half. She says they must be stewed a long time—five or six hours at least. They are then well seasoned with salt and pepper; bottled and corked tight, and kept cool. Ours are usually set in the earth in the cellar bottom. My family are very fond of it, either cold or warmed, with beef steak or roast beef. X. Y. Z.

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Preserving Green Currants Fresh.—M. S. Wilson, of Lenox, Mass., preserves green currants in *dry* glass bottles, corked and sealed tight, placing them in a cool cellar. Green gooseberries may be preserved in the same way. He adds, "In this manner green currants have been preserved in my cellar for years. I have green currant pies on my table at all seasons of the year."

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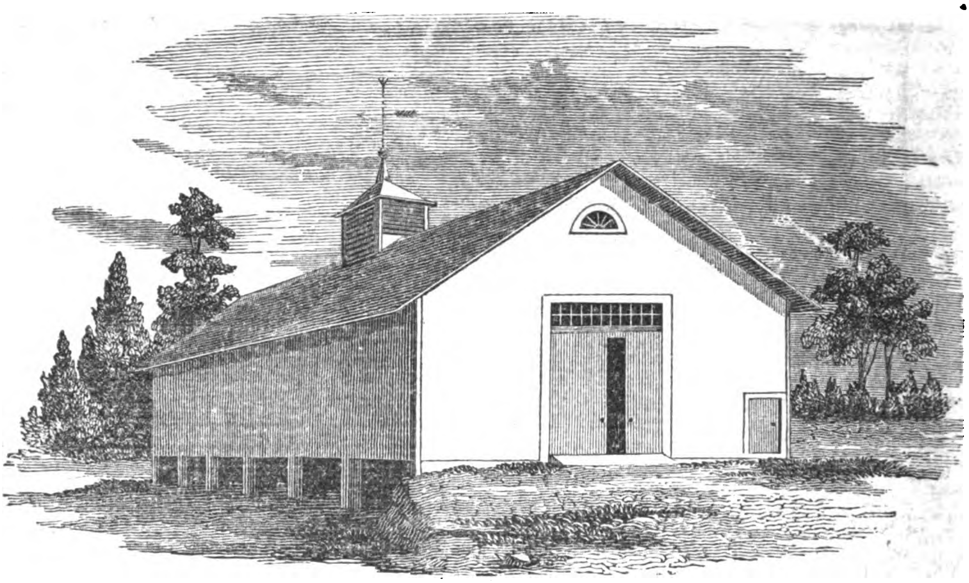
To Remove Spots from Leather Gloves.—Suspend them in a glass jar, closed, over a portion of the strongest liquid ammonia. The gaseous ammonia gradually removes the spots; but great care is to be taken that the liquid does not touch the gloves, or the color will be badly injured.



PLAN OF A BARN.

The dimensions of the barn intended to be here represented, are, length 100 feet, width 40 feet, height of posts 18 feet. The principal divisions are a floorway, 12 feet wide through the centre; a bay, 14 feet wide, on one side of the floorway; and an apartment for cattle and horses, 14 feet wide, on the other side.

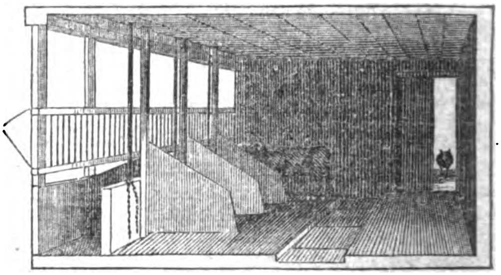
A cellar, as shown in the perspective view, extends under the whole building. The site selected for the barn should be the side of a hill or knoll, so that the bottom of the cellar may be nearly on a level with the ground on the open side, and that the entrance to the barn at either end, may be easy, without making much of an embankment. The open side to the cellar should be to the south or east, and the cattle and horses should stand on the north or west sides of the barn, with their heads towards the floorway. The manure is to be passed through the floor into the cellar in rear of the animals, and is to be kept in a compact body, or from being too much spread about, by means of strong moveable planks, supported against posts. The cellar should be of such depth that carts or wagons may be readily loaded and unloaded in it, and that all the work to be performed there, can be carried on with convenience.

An apartment may be made in the cellar for storing roots or vegetables. It should be at one end, and in part, at least, under the floorway, so that vegetables can be "dumped" into it from a cart. Its size may be regulated, of course, according to the extent to which roots are intended to be used for winter feeding. If the walls are of brick or stone, of proper thickness, and well made, the root cellar will be secure from frost.

The other parts of the cellar may be used for various purposes; part may be used for sheltering cattle, or sheep; part for pigs, if expedient; and part for storing sleds, carts, and other implements, when they are not in use. Being open on one side, it is sufficiently dry and airy for any of these purposes.

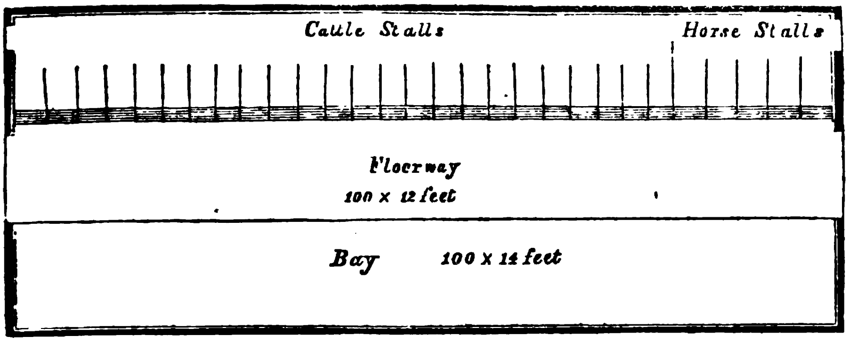
The portion of the cellar not otherwise occupied, forms a part of the barn-yard, and the yard may be made to embrace as large an area as circumstances render necessary. Care should be taken that the manure in the yard is not wasted by drainage. Sheds,—which may be used for sheep, or for other purposes,—and other buildings,—as granary, piggery, &c,—may be placed round the yard in such a manner as to ward off the cold winds, and admit the sun on the southerly side.

The apartment in the barn designed for horse-stalls, is calculated to be eight feet high, and that for cattle, seven and a half feet. Some may suppose that this is a greater height than is necessary; but it is desirable that horses should have so much space that there is no liability of their heads striking against the upper floor, as there is reason to believe that evils, (if not the "poll evil,") have been produced in this way. It is desirable, also, that the apartments, both for horses and cattle, should be sufficiently high in the walls to allow persons of ordinary height to pass readily through or about them, and as that part of the floor on which the animals stand is to be raised, (as will presently be explained,) the height mentioned is believed not to be too much.



Section of Cattle Stalls.—Fig. 41.

The divisions of the apartments appropriated to cattle consist of a manger, a platform on which the cattle stand, a gutter to receive the manure, and a narrow platform or walk, next the wall. The width of the mangers is two feet. On the side next the cattle, they are formed by a piece of timber, seven or eight inches thick, and ten inches high, running the whole length of the apartment, and into which the stanchions, to which the cattle are to be tied, should be inserted at the bottom. A plank, a foot in width, fastened edgewise, forms the opposite side of the mangers. Over this plank



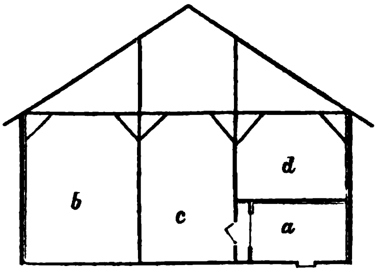
Ground Floor.—Fig. 42.

there is a perpendicular rack, two feet high, but there is an open space of six inches between the plank and rack. To the bottom of the piece which supports the rack, there is attached by a hinge, on the side next the floorway, a kind of door, on which the hay or fodder is placed. This door may be kept at any angle, and let down or shut up at will, by means of small chains, which at one end are attached to the door, and fastened to hooks, at the other end, on the top of the rack.

The platform on which the cattle stand, is calculated in the plan at five and a half feet wide, but five feet will answer. It is raised five inches at the side next the manger, and has a slope of two inches towards the gutter, which is two feet wide. A moveable plank in the gutter, admits the manure to be passed into the cellar.

This plan, it will be seen, combines many advantages, while it admits of considerable modification to suit circumstances, without losing its general principles. Each of the three principal divisions,—floorway, bay, and stalls,—extends the whole length of the building. This arrangement we consider important, and would adopt it in all cases. We would make the width too, of the several divisions about what it is in this plan, whatever might be the length of the barn. A great advantage is, that if it is wished to make an addition, it is simply necessary to extend the length, which is readily done without in the least interfering with the original building, provided due care has been taken in choosing the site. Another great advantage of this plan, is the convenient manner in which it admits of the hay and grain being stored. Suitable timbers are placed at proper distances across the bay and space over the stables, and the various articles being laid up between these, separately, each kind may be readily got, at any time, without being obliged, as is frequently the case, to pitch over a quantity of fodder before the article wanted can be reached. Much expense is likewise saved in unloading,—two hands only being required at any time. The length of the floorway admits of several loads being taken into the barn at once; which, when business presses, or "catching" weather renders it necessary to shelter a large quantity of hay or grain in the shortest possible time, is a point of great importance. The teams enter the floorway, loaded, at one end, are unloaded, and pass out at the other end.

The floorway is lighted by windows over the doors. The doors are placed on small wheels, which move on iron rods. This is much more convenient, and the doors are much stronger than when supported on hinges. A *ventilator* is placed on the centre of the roof, which frees the barn from the gases arising from fresh-stored hay and grain. As a protection against lightning, a good conductor is attached to the side and roof, extending up several feet above the ventilator. The covering of the sides and ends should be boards well seasoned and matched; or they may be rough-boarded and shingled—a plan which is often adopted in Massachusetts. A coat of cheap paint or coal tar should be given to the exterior, and will abundantly repay the cost in preserving the building. All the floors should be made as tight as possible, to prevent the entrance of any exhalations from the manure in the cellar. The scaffolding should also be laid close, to prevent dust from falling on the horses and cattle.



End View.—Fig. 43. *a*, stables—*b*, bay—*c*, floorway—*d*, space over the stables.

When the other parts of the barn are filled, a temporary scaffold may be laid across the floorway, above the windows over the doors, on which a considerable quantity of fodder may be stored.

The general arrangement of the cattle stalls, as shown in fig. 41, will be found especially convenient and useful. The construction of the rack and mangers, is preferable to any other plan the writer has seen. The rack is designed to receive all the hay or fodder for the cattle, excepting that which is cut into chaff. The cattle eat from the rack, and whatever straws are dropped as the fodder is pulled out, fall into the manger. If the cattle have not cleaned the racks when they lie down to rest the fodder does not become contaminated by their breath, as the open space of six inches below the rack permits the escape of the breath, and at the same time allows the animals constant access to fresh air. When stock is fed in common mangers, with uncut hay or fodder, that portion of it which is not eaten at once, is "blown" on, or becomes so affected by the breath that it is not readily eaten afterwards. The feeding arrangement described in the plan obviates this objection.

Another advantage of the open space between the rack and manger, is, that vegetables, meal, or cut fodder, may be passed through it directly into the manger. A movable spout, through which the articles may be poured, facilitates this operation.

The mangers are represented in the plan as being in separate divisions, each animal having one. This is believed to be best, as it is frequently wished to feed variously. By separate mangers, each animal may be fed in any way, or with any kind of food, without being annoyed by others. They may, however, be made separately, or not, as is desired. If separate, it will be necessary to have short partitions, as represented in fig. 33, between each animal, to prevent their interfering with each other. A space of three and a half feet is allowed to each animal, if partitions are made. This is not too much room for large stock, though three feet only, where there are no divisions, is all that is allowed, in many cases.

Each animal is tied by a chain round the neck to an upright stanchion. This mode of fastening is safe and convenient, and enables the animals to rest easy. The rack and mangers for horses are made in a similar manner to those for cattle, excepting that they are higher, and the mangers somewhat larger.

The cattle stand on a raised platform, which admits of their being easily kept clean—the manure and urine falling into the gutter, from which they are thrown into the cellar. The narrow platform, next the wall, affords a clean and convenient walk, behind the animals, and also forms a suitable place to set pails, &c., when the cows are milked. Some farmers tie their young calves on this platform; but a separate apartment is preferable for this purpose.

The stables are lighted and ventilated by windows in the rear. (Owing to the situation of the stables, those windows do not appear in the cut.)

The cattle pass from the cellar and yard into the barn, and *vice versa*, through a door at the farther end of the stable. Or an inclined way may be made, communicating directly with the cellar, from the stable.* The advantage of this is, that the cattle are got from the yard and cellar into the stalls, without going round the end of the barn, which, in bad weather, or when the ground is muddy, is quite inconvenient. The ingress and egress for horses is the small door in front. A small apartment may be reserved next the wall, for harnesses, &c., and if the whole of the bay is not wanted for hay and grain, a room for carriages and for other purposes, may be constructed opposite the horse stalls.

Water should be supplied to the cattle in the cellar. It will not be liable to freeze much here, and if properly protected against filth, it will be fresh and pure at all times. Some, however, prefer watering in the barn, and for this purpose have a trough extending through the mangers, into which the water is conveyed whenever it is desired.

The cellar forms the best possible receptacle for manure, all its valuable qualities being here readily preserved. The urine, undoubtedly the most valuable portion of animal excrement, is incorporated with the dung, and by keeping the heap level, and frequently spreading over it a quantity of litter or muck to absorb a portion of the liquids, the mass is kept in a portable condition, and nothing is wasted. Attention, however, should be paid to having the cellar sufficiently tight in the first instance. The wall should be made tight, and if the ground is open or porous, a layer of clay, or mortar made with water-lime, should be spread over it, and allowed to become firm before it is used.

It is proper to observe that in some situations, from the wetness of the ground, it would not be advisable to make cellars. In such cases, a trench two or three feet deep, according to the nature of the soil,) and ten to fifteen feet wide, may be made with advantage. It is advisable to have the trench extend under the barn so far that the urine from the cattle may be conveyed into it; and if the bottom and sides are prepared as above directed for the cellar, and a shed, attached to the barn, is erected over it, the manure will be kept without much waste, and will be found much stronger than that which is exposed to the air in the usual manner.

The expense of erecting such a barn as is here described, will be from $700 to $900, according to cheapness of materials and labor.

CULTURE OF TURNEPS.

It should be remembered that it is not too late for sowing turneps. The Swedish turnep, (ruta-baga,) should be sown, if practicable, as early as the middle of June, but the 20th or 25th of the month will answer if they cannot be got in sooner. The yellow Aberdeen is a kind which requires nearly as long a season as the ruta-baga. The common flat turnep grows much quicker than the kinds before mentioned. It will produce a good crop, on tolerably rich land, sown as late as the 25th of July or the first of August. Ground which has produced a crop of hay, rye, or wheat, may give a crop of flat turneps the same season. They are less nutritive than the other kinds, but are, notwithstanding, very useful in feeding stock during the beginning of winter; and from the convenience of cultivating them as an after crop, they are in many instances profitable. For late keeping, or feeding in the latter part of winter and spring, the Aberdeens and Swedes are best.

A soil inclining to sand is most suitable for turneps. Compost of muck and barn-yard dung, with a dressing of leached ashes, furnishes a good manure. The seed should be sown in drills. Two feet spaces between the drills will admit the use of a small harrow or cultivator in cultivating the crop. Flat turneps should be thinned to eight inches between the plants, and ruta-baga to twelve inches. If the ground is not very porous and dry, it will generally be preferable to form ridges on which to sow the crop. They may be made with a small plow drawn by one horse, or more readily with a double mould-board plow. On stubble or sward ground, care should be taken in making the ridges, that the grass and weeds are not turned up. The ridges should be levelled by passing a roller over them, before the seed is sown. A pound of seed to the acre, evenly distributed, as it may be by a good machine, is sufficient.

A dressing of plaster sown on the plants as soon as they are up, while they are wet with dew, will afford considerable protection against the turnep fly or *flea*, and will on many soils greatly hasten the growth of the crop. The weeds must be killed as soon as they appear. The scuffle-hoe is the best hand tool for this purpose. It may be run rapidly along the ridges, close to the plants, and may take out almost every weed in the row without doing any damage. The spaces between the rows may be chiefly worked by a harrow or cultivator—the former is preferable on light lands. The plants should not be much thinned till they have got into the fourth leaf, and appear to be pretty well out of the way of the fly.

Feeding Turneps.—When milch cows are fed with turneps, the milk frequently has a disagreeable flavor. To eradicate the taste communicated by the turneps, different substances have been recommended to be put in the milk, such as saltpetre, cloride of lime, &c. Mr. J. McD. McIntyre, of this city, who is in the habit of feeding his cows during winter with both turneps and brewers' grains, informs us that while both these articles are used, no unpleasant taste is given to the milk; but that if the grains are omitted, the flavor of the milk is affected by the turneps. His rule has been to feed each cow about half a bushel of Swedish turneps and half a bushel of grains per day, and it has been repeatedly noticed that when the turneps are stopped the milk is considerably decreased in quantity, and the cows appear to be less healthy.

The custom house value of the specie dollar of Denmark, is one hundred and five cents.

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* See Feb. number of the Cultivator, page 42—description of Mr. Jaques' barn, Worcester, Mass.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

LETTERS FROM PROF. NORTON.

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Utrecht, Netherlands, April 5, 1847.

Editors Cultivator—As the opening spring is rousing the agriculturist to action, and the various crops, objects of his care and hopes, are being committed to the earth, or are already showing themselves above its surface, I occasionally emerge from the laboratory, and walk out of the city for a mile or two; the circle of my observations is not very extended, and the season of activity has but just commenced; I nevertheless see many things which are new, and somewhat peculiar. I therefore propose to give you in this and succeeding letters, a series of sketches of what I may see and hear in this immediate vicinity.

There is a great variety of land about Utrecht, from a light sand, through rich black loam to stiff brick clays. I hope to be able to compare the farming of these several kinds of land, the different systems pursued in their management, and the quantities of crops grown. All views here are limited in extent, the country being so flat that but little can be seen at any one time, except by ascending some lofty tower.

The main roads, paved with brick, and very smooth, are not numerous, but numbers of small ones branch off at short intervals, and wind about among the fields like foot paths. A ditch runs along on each side, generally the only separation from the field; there are no fences and few hedges. One of these ditches, about four feet deep, I lately saw crossed by a truly original bridge. Several loads of manure had been thrown in, filling the ditch to the brim, and then consolidated by trampling until sufficiently hard to permit the passage of wagons.

The fields are generally of good size, frequently of 35 or 40 acres; but the advantages of size appear to be lost by the custom of growing half a dozen different crops in one enclosure. Each field seems to represent an entire farm.

I to-day saw for the first time, one of their plows in the field; it was quite long and wide, with but one handle, and double wheeled, resembling much the Norfolk plow of England, but far larger. The furrow was not more than four inches in depth, and about eight inches wide. A two horse harrow in the same field might almost have been drawn by two men; the teeth were all curved forward. So far as I have seen, all the work is well and handsomely finished, the surface is left very mellow and smooth; on such land as most of it is, this however, is not strange. I have lately seen some new plows, and other improved implements exhibited here, but it is very difficult to bring them into use. Even if the farmer himself is brought (no easy task,) to the trying of something new, his men are generally very obstinate as to accomplishing anything with it. I heard of an enterprising man in the province of Groningen, who determined to adopt some of the best English implements. He imported them, and compelled his men to their use; they, however, broke them whenever they could do so without being discovered, and he was obliged to give it up, and return to the old awkward tools.

The autumn sown wheat is now looking very well, and is said to promise unusually through the whole country. The spring sown grains are seemingly for the greater part, deposited in the soil.

Potato growing goes on still, notwithstanding the experience of former years. I saw a new way of planting to-day. A line was stretched across the ridge of about twenty feet wide, and following it, the potatoes were dibbled in, at distances of from eight to ten inches in the rows, and from two to two and one-half feet between them. The potato was dropped into the hole made by the wooden dibbling instrument, and covered by a blow of the same. The tubers used for seed were of the smallest kind so far as I saw them, not much larger than walnuts. The whole process was extremely slow. The manure was spread and plowed in before planting.

A very large extent of ground is occupied in the cultivation of rape, or cole, called in Dutch, "koolzaad." Some of it appeared to have been sown this season, indeed, by far the greater part, but from its size and general appearance in other fields, it must have been sown in the autumn. This plant grows to about 18 inches or two feet in height, and has a seed of the same shape as mustard seed, but five or six times larger. The oil obtained from this seed is well known; the quantity yielded is very great, being stated by Prof. Johnston as from 40 to 70 per cent.

The hard cake obtained after the oil is expressed, is ground, and under the name of rape dust is extensively used as a manure, especially in England. It seems to be remarkably efficacious when applied as a top-dressing to wheat. In dry seasons it produces little or no beneficial effect, and in some cases has been known to actually diminish the crop. This rape cake would be an excellent fattening food for cattle if they could be persuaded to like it; but it has a sharp pungent taste that is highly disagreeable. I believe that by far the greater part of the cake made here goes to England. I have seen while travelling in Norfolk and Suffolk, that it is there one of their principal and most highly prized resources. Prof. Johnston, in his lectures, gives some interesting experiments, comparing rape-dust and guano, under like circumstances.

John P. Norton.

NOTES OF A TRAVELLER IN ENGLAND—No. 4.

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Roads, Cottages, Flowers, &c.—The perfection of the roads in England, has been the theme of every traveller through that richly cultivated country. The travelling by coach on the great thoroughfares through the kingdom, has been greatly diminished since railroads have been constructed. In many parts of the kingdom, however, the coach is still in use, and some idea may be formed of the ease and comfort of that mode of travelling which was formerly the pride and boast of every Englishman. Over their level and smooth roads, it is certainly one of the most delightful methods of travelling *in fine weather*. A seat upon the box with the coachman, who is usually intelligent and free to converse with a traveller, and well acquainted with the history of persons and places of interest on his route, renders this a very pleasant method of seeing the country, and learning the incidents which interest a stranger. The coachman has nothing to do with the horses until the time arrives for starting. He examines the team, sees that all is right, mounts his box, and is off at the rate of ten miles an hour, which I found the usual speed on all their roads. When he arrives at the place for changing horses, his lines are thrown down, and he enters the public house, where he is the great man among the hangers on, and as he receives notice that all is ready, mounts his box again, and is off.

The roads usually wind round through the farms, bounded on each side, generally, by neatly trimmed hedges, with trees occasionally interspersed, presenting every few rods new views and interesting scenery, that are truly delightful. The roads are made with the greatest care, generally macadamized, and entirely smooth. They are much narrower than with us, usually through the country, only wide enough for carriages to pass. The custom in England is, for each team to turn to the left, instead of the right, as with us. Its advantages are apparent, as the driver setting on the right, has in view the vehicle which is approaching, and can more readily ascertain how far he can drive with safety. In making their roads great care is taken to avoid hills, they judging, I suppose, that it is not ordinarily much farther to *go round a hill* than to go over it. Foot paths are usually made with care on one or both sides of the road. No danger is to be apprehended from swine, or other animals, as they are not permitted the enjoyment of that license, which seems to be their birthright in our free country. I have never witnessed them running at large in city or country, not even in sweet Ireland.

The cottages which you pass, are generally neat in their outward appearance, very frequently covered with climbing vines, and flowers usually in abundance in the small yard in front, and often in pots at the windows. The cottages are low, the roof frequently not as high as the top of the coach, and a full view of the interior is enjoyed, as they are situated close to the road. Every few miles villages are passed through,—but the term village, as descriptive of our American villages, gives but a faint impression of an English one. Instead of spacious streets, with painted houses of two or more stories, we find, as the road winds around through the narrow streets, small cottages and shops crowded together close to the street, frequently with thatched roofs, with brick or stone floors. A house or two, occupied perhaps by the rector or physician, are somewhat more aristocratic in their appearance. Many of the buildings are white-washed, and covered with vines, and present, upon the whole, an interesting appearance, but little of the comfort of one of our villages. They appear as ancient, many of them, as their country, and I presume little change has been made in them for centuries.

England truly is the land of flowers. They are to be found everywhere. The markets are filled with them. You meet them in the streets carried about by females and children for sale, and everybody, from the poorest up to her majesty, have a bouquet of flowers in the button hole or about the person. In the omnibus coach, railroad cars, on the steamer, on change, in the store—in fact, everywhere, they are to be met with. 'Tis delightful thus to witness their taste for flowers. It adds much to the pleasure of every one, and when it can be obtained at so cheap a rate, it is certainly desirable to cultivate a taste for them.

The loads which a team can draw over their roads are nearly twice as heavy as could be drawn over ours with the same power. It will require time and care to bring our roads into such a state as to resemble roads here. It would be well, I think, to begin to approximate to the like condition. Had the labor which has been so unskilfully expended on our roads for the last twenty years, been laid out in macadamizing them, we should, on all our principally travelled roads, have had them as good as the roads are here. It is hoped that improvement, in this respect will not much longer be delayed. H.

Corn in New-York.—According to the census of 1845, there were 595,135 acres planted with corn the preceding year, in the state, giving an aggregate of 14,722,115 bushels.

RURAL NOTICES ABROAD—By Caius.—No. V.

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Tuscan Agriculture.—Little of the agriculture of continental Europe is superior to that of Tuscany. This is owing in some measure to the natural advantages of soil, climate, and position, and not less to the benefit of wholesome laws, which secure to the peasant the full advantage of his labors. At the first approach, as one comes from the south, into the dominions of the Grand Duke, he is struck with the superior air of the field laborers, with their happy, contented looks, their neat dresses, and is rejoiced to find at length in Italy, a peasantry that does not beg.

Here and there, it is true, among the mountains, beggars are to be met with even in Tuscany, yet even these are of neater and more cheerful aspect than are to be found in the Roman States. The cottages are better built, and are cleaner; and at the doors of nearly all of them, you will see the Tuscan girls busy braiding their Tuscan hats. The straw is a species of wheat grown on indifferent soils, and cut before fully ripe. It is sorted, stripped, bundled, moistened, bleached, and split, before going into the hands of the *plaiters*. The pressing is done after braiding. The sums earned by the braiders is a mere trifle. I had the curiosity to ask a mountain girl on the way from Terni to Florence, how much she could earn by a week's braiding. "If the work is well done," said she, "two pauls (24 cts.) a week; but if not well done, nothing."

The crops raised, are in general the same with those of the Papal states. Rice is occasionally seen along the banks of the streams, and is irrigated with the utmost system. Corn is more common, and better than further south, though the mode of culture is very much the same. Clover grows most luxuriantly; mulberries also make their appearance, and silk is a large article of Tuscan manufacture. In the true spirit of economy, the mulberry orchards are also vineyards, and the vines are festooned from tree to tree, as in the Sicilian and Lombard kingdoms. The wine however of Tuscany, is generally of an inferior quality—by no means so good as that of the Roman States. Indeed, so far as my observation has extended, I have found it to be true, that when the vine is suffered to clamber upon trees, and extend itself from one to the other, as in Tuscany and Lombardy, though the yield in grapes is much larger, the clusters being larger and fuller, yet the quality of the wine is vastly inferior in body and in flavor, to that grown upon short plants, as in France, and along the Rhine. Much of the Neapolitan wine is grown upon trees, as in Tuscany, but by far the best of the kingdom, the "*Lachrymæ Christi*," is grown after the method last named.

Plums and figs grow abundantly in the neighborhood of the Tuscan towns; and hedges and cultivation generally approach the neatness of English appearance. Flowers of every color are to be seen in the fields, and by the road side, and the valley around Florence seems in its whole extent a garden. The land is divided into small farms, in many instances managed by their owners; the road-way is clean and smooth, and hedges skirt it that blossom in early May. The fields are filled with plum, and cherry, and mulberry trees, with vines clambering over them; and beneath is some rich crop of wheat, or clover, or tares. The cattle, when you see them—for in the neighborhood of the towns soiling is much practiced—are smooth, fine-skinned animals, of fair size and make, and generally of a light grey color, verging upon white.

The spade is the most general implement of culture; the plows, however, are substantially made, and perform their work well. Gates are neat in their construction; gardens are prettily laid out and choicely stocked.

The Tuscan peasant is more courteous in his air and manner than other peasantry of Italy. He lifts his hat to the passing traveller; his dress is clean and well made. If you enter into conversation with him you find him civil and communicative to an extreme. In short, the valley about Florence, is, considering its natural advantages of soil and situation, —its picturesque beauty,—its government, its climate, the character of its inhabitants—the most desirable spot in Italy. Half a dozen times, on my first descent of the mountains into Florence, my eye rested on snug lying farmeries, with well cultivated fields, and blooming hedges about them, with most covetous indulgence; and I thought I would have been content to have passed my life upon them, in sight of the great dome of the Florentine cathedral lifting out of the houses, in the lap of the valley below;—in sight of the quaint old maccolated tower of the palace of the Duke;—in sight of the bright Arno, winding off like a silver stripe among meadows of as rich luxuriance as lie anywhere under the sun;—in sight of the blue opposite mountains of Fiesole and Vallombrosa, and under as soft and pure a sky, for months together, as that of New England in the mildest days of an October summer.

The Grand Duke himself has an exceedingly well regulated farming establishment, a short drive from the city down the Arno. The stables are imposing looking buildings, of no inconsiderable architectural pretensions, and ornamented at the angles, and over the central doors with well executed heads of cattle, in stucco. The cows are of the Swiss breed, and dun color, in fine condition, kept constantly in stable, except a short time for exercise in the morning. Their food during summer is rye grass, clover, and vetch, with sometimes a taste of grain.

The drainings of the stable pass directly, by means of gutters in the brick floor into a large vat, whence it is transported in casks, to enrich the grass lands. Fourteen quarts a day, I was told, was the average yield of milk. The calves, as in all well regulated establishments I have seen, are taken directly from the cow, and reared by hand. The dairy is in keeping with the nicety of the stabling. The homes of the laborers are of uniform and tasteful construction—of stone, and stuccoed. Both the Duke and Dutchess give occasional personal inspection to the premises. The example of the Duke has undoubtedly had its influence, in direction of agricultural taste and method.

The market of Florence is profusely supplied with vegetables and fruits, and its meats are good. In no city, indeed, of its size, which I have visited, can the necessaries and the luxuries of life be secured at so cheap a rate as in Florence. For instance, a dinner of two or three dishes and dessert, with a half bottle of wine, can be had in a well furnished restaurant, for the trifling sum of twenty-five cents. A ride of an hour in a two horse carriage may be had for the same sum; other matters are much in the same proportion.

HOEING OR CULTIVATING CROPS.

The chief or primary object in hoeing crops is to increase the quantity and improve the quality of the produce. To this end, various means are adopted. A point of the first consequence, is the eradication of weeds and all plants excepting those which it is wished to cultivate. The necessity of destroying weeds, arises from several causes. Their growth interferes with and injures the crop in various ways. They exhaust the soil, more or less, of the elements which constitute the food of cultivated plants; they especially abstract the moisture of the soil, making a constant drain upon it in this respect, from the first moment of their existence.

It is of great importance that weeds should be killed while they are young. If killed at this stage, the injury they occasion is comparatively trifling, and the expense incurred in the operation is but little, compared with what would be required to effect the obje t when they are more fully grown. The brush of a hoe or the scratch of a light harrow, will effectually kill a weed at the time it appears above ground, whereas the growth of a few weeks would give it such a hold on the soil that it would withstand considerable force, and to eradicate it would require ten times the labor which would have effected the object in the first instance. Besides, if weeds are allowed to reach a large size, their roots become more or less mingled and entwined with the roots of the cultivated plants, so that in pulling up the weeds, the crop is liable to be injured.

Some people seem not to be aware of the serious injury which the introduction of pernicious plants is to the soil. Some of the rich "corn lands" of the western states, have already suffered a great deterioration from this cause. The negligent and slovenly manner in which the corn is too frequently "tended," has filled the soil with every pest which will grow on it. The foul growth is in many cases suffered to increase every year, till there seems to be between the weeds and corn a great strife for the mastery; and though the corn, on some of the most fertile fields, grows twelve to fifteen feet high, or more, it scarcely exceeds the weeds in height or strength, and judging from the liberal *border* around the fields, of which the weeds seem to have gained full possession, and from their frequent appearance among the crop, the prospect seems fair for the day being ultimately carried by them.

Stirring the ground, to a certain extent, is beneficial to crops, aside from the effect of keeping down the weeds. By keeping the soil loose, the roots of plants more readily extend themselves; the soil is rendered more permeable to the sun, by which a more congenial temperature is gained for plants; it facilitates the absorption of dews, which bring down ammonia and fertilizing elements from the atmosphere; and it exposes the soil more to the action of the air, by which the decomposition and combination of the various elements of vegetable food is effected. The action of the oxygen of the atmosphere is thought to be particularly beneficial on clays, and slaty and granitic soils. The combination of the oxygen with the iron, and its action on the other mineral elements, produces a disintegration of the stony materials, and leaves the soil more friable. The admission of oxygen into the soil, may likewise be useful by its entering into combination with the carbon of the soil, and thus forming carbonic acid, the food of plants.

On some soils, especially those of a tenacious nature, a hard crust frequently forms, by which heat and air are much excluded. Some simple implement, as a harrow or cultivator, should be used with sufficient frequency to prevent the crust from forming. As the growth of plants increases, their roots are more widely extended, and it is not proper to use tools which will mutilate and destroy the roots.

It is important that plants should be duly exposed to the influence of light and air. It is only under the influence of light that they are able to digest their food. They take in carbonic acid and water, but by the aid of light, they decompose the carbonic acid, giving off the oxygen, and retaining the carbon to form their tissues.[*] This influence of light is quite surprising. If a plant is placed in a dark room, and a ray of light is admitted on one side, the ends of the branches are soon directed towards the light, and the plant seems to struggle to reach that part of the room where the light is strongest and its influence most direct. If a small tree be planted under or near a large one, or on the side of a forest, it soon begins to lean to the side nearest to the light, and will continue to grow in this direction, putting out but few or no branches on the side most affected by the shade of other trees.

These facts are cited to show the necessity of giving plants sufficient room. If they are crowded too thickly together, the sun is too much excluded from the soil, and from the want of sufficient circulation of air, the plants are less healthy, being more subject to blight; and the blight is prevented from coming in contact with the stems and leaves in such a manner that the sap can be properly elaborated. Where plants stand so thick that the light strikes them mostly on the tops, they are drawn into slender stalks, having but little substance.

But in cedar and pine forests, where it is sometimes desired that the trees, in order to make timber for certain purposes, may attain a great height in proportion to their circumference, a dense growth is an advantage.

NEW DISEASE AMONG NEAT CATTLE.

On a fine morning in June, 1838, a neighbor of mine requested me to examine the bodies of two fat steers which he had just found dead in his pasture field, and which he suspected had been poisoned. He said that having driven one from the field late the previous afternoon, he had observed the two that were now lying dead before us, quietly grazing about, apparently in perfect health. As their hides had been removed, my attention was first attracted by the bloodless appearance of the flesh, like that of well dressed butcher's meat. There was no offensive smell, nor any distension of the abdomen. On laying open that cavity no gas escaped, and the stomach, or maw, the part first exposed, presented a perfectly healthy appearance. On cutting into this organ, it was found well filled with grass, which had a very fresh and natural appearance, as if the animal had fed in perfect health until within a few minutes of its death. On raising up flaps with the knife, a thin pellicle was seen to detach itself by its own weight and that of the grass adhering to it, leaving the villous coat of the stomach perfectly clean, and apparently healthy. The maw being now removed, brought into view the liver, the spleen, and small intestines. Hitherto every thing had presented nearly a natural aspect, but this was now no longer the case. The liver, indeed, appeared healthy, with the exception of a somewhat unnatural paleness, but the spleen was much distended with black blood, and the small intestines were found filled, entirely filled with the same fluid! So intensely did this dark colored blood show through the thin coats of the bowels, that the bystanders mistook it for mortification; but after letting out their contents the membranes assumed their natural color. It seemed that all the blood in the body had found its way into the bowels, and this view of the matter was strengthened by examining the viscera of the chest. The lungs were very pale and bloodless, and upon slitting open the heart across the septum, so as to lay open both ventricles; the right was found to exhibit some bloody stains. but the left was as clean as if it had been wiped out with a wet cloth. The animal had evidently died of bleeding, and that without the escape of a drop of blood from the body. It had probably fed until dark, wholly unconscious of its impending fate, and then quietly laid itself down to sleep the sleep of death. Nearly all the blood in the body, by some unknown process, had been suddenly transferred from its natural receptacles into the intestinal tube; and so suddenly had this been accomplished, and with so little previous indisposition, that all the animal functions had been performed in apparently the most healthy manner until within a few moments of dissolution. But *how*, or by what channel had the blood been so transferred, was a question for the anatomist. By what unknown, what miraculous process had such a state of things been brought about? How could the animal live until the blood-vessels, and even the heart itself could be entirely emptied? No butcher ever accomplished a feat like this. Slit open the heart of the most thoroughly bled animal from the slaughter house, and it will be found to contain large clots of blood. No human means can sustain life until the heart squeezes out the last drop of its contents. No poison known to man—no chemical knowledge, however profound, could concoct a poison capable of producing a death like this! To him alone who created, is it reserved to slay in a manner so wonderful.

It may well be supposed that I felt a deep interest in this strange discovery, and lost no opportunity in its further investigation. Many deaths of the same kind occurred in the town of Rye that season, but I could learn of only one instance in which any indisposition was noticed before death. Most of the animals must have died in the night, as they were found dead in the morning, without having exhibited any evidence of disease the provious day. One alone was seen in the day time for a few minutes staggering about, but it soon settled upon the ground and quietly expired. All the examinations made that season, presented precisely the same appearances.

There was the same bloodless appearance of the flesh, the absence of fetor and gaseous distension of the abdomen; the same fresh and natural condition of the herbage in the stomach, as if the animal had fed until the last hour of life; the intestines presenting the same dark purple appearance, in consequence of the whole tube, through all its doublings and convolutions, being entirely filled with blood; while the heart, in every instance, was found entirely empty.

I heard nothing more of this disease for a space of eight years, until last summer, (1846,) when a gentleman one morning requested me to examine the body of a cow he had just lost, in the hope that I might be able to detect the poison with which, as he supposed, she had been destroyed. He stated that she had been brought from the field in the morning with other cows for the purpose of being milked, and was at that time apparently as well as any of them. When about half milked she stepped away and laid down under a tree; the milker coming into the house, related the fact, and complained that she could not get her up again. On going out himself he found her dying, and she actually expired within half an hour from the time of laying down. This statement at once induced suspicion that the malady of 1838 had returned again, and I described to him minutely the appearances then met with, and ventured to predict that his cow would be found in the same condition; in which case, I remarked, the idea of poison by any human agency, cannot for a moment be entertained. It is only necessary here to add, that the examination confirmed the prediction in the most minute particulars.

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[*] Carbonic acid consists of carbon and oxygen; 6 lbs. of carbon and 16 lbs. of oxygen forming 22 lbs. of carbonic acid.—*Johnston.*

Hitherto this disease has been confined entirely to neat cattle, and as far as I knew, had appeared only in the summer months. In February last, however, a friend called to request the chemical examination of the stomach of a young heifer that had just died, saying that he had previously lost several cattle in the same way, and that his neighbors, all suspecting poison, had urged him to have the matter thoroughly investigated. In answer to a question of mine, he stated that he had lost ten in all, seven of them in the warm months of summer, and three the present winter; and that he had never found one of them sick; the first intimation of his loss being that of finding them dead in the field, with but one exception, and in that the animal was breathing its last when discovered. On cutting open the specimen he had brought with him, it disclosed the peculiar appearances described as belonging to this disease, and I stated to him the discoveries previously made, and that on his return home, a further examination would probably show him the heart destitute of blood, and the intestines filled with it; and that he might rest assured that no human agency could have had any share in the matter. This last suggestion seemed to be very acceptable to him, for the suspicion of having an enemy about him base enough to destroy his property in this manner, was exceedingly annoying. And here it will be proper to point the reader's attention to the fact that every application for post-mortem examinations hitherto mentioned, had been based upon this suspicion of poison; a suspicion far more harrassing and vexatious to generous and worthy minds than the loss of property itself; and it was a hope of being able to dissipate this delusion, so fraught with mischief to society, and so liable to disturb the harmony and good feeling of every neighborhood where it might be entertained, that first suggested the idea of writing this history. But the singular and novel features of the disease itself, and the deep interest the farmer has in its further investigation, may perhaps give it a still higher claim to a place among the agricultural notices of the day.

It was the intention of the writer to compare the peculiar features of this disease with the symptoms detailed in the history of past epidemics among domestic animals, and likewise to offer a theory in explanation of the strange physiological fact alluded to in describing its post mortem appearances; but the length to which this article has already arrived, must defer this intention to a future period. THOMAS CLOSE, M. D.

Portchester, Westchester Co., March, 1847.

THE ORCHARD AND THE GARDEN.

CULTIVATING ORCHARDS.—In many large districts, a greater number of fruit trees have been set out during the past four years, than previously since the settlement of the country. The attention to the subject which has been thus awakened, seems destined to work quite a revolution in rural improvement, and in the tastes of our people, and to enable at least a part of the community to taste for themselves some of the most delicious fruits in cultivation. Hitherto most of the fine varieties have perhaps not been known to a thousandth part. And notwithstanding the rapid increase of young orchards, a long time must yet elapse before every person, even of ample means, has a plentiful supply of the best successively ripening varieties.

Nothing has operated more to check improvement, than the neglect of young trees after they are once set out. The man who transplants fifty peach trees into meadow ground, and loses one-half by being smothered with the growth of the grass, and the other half the following winter by the gnawings of meadow mice, will not be long in becoming disheartened in fruit culture. He who sets out a hundred apple trees in grass land, or in ground devoted to the cultivation of wheat and oats, where triple the time necessarily required, elapses before the trees bear, satisfies himself and his neighbors that he who plants young trees, only plants for posterity. No conclusion can be more erroneous, no practice more pernicious to horticultural improvement. When the best management is given,—and the best is incomparably the cheapest and most economical,—young trees, no larger than a carriage whip, may be brought into a good bearing state, in an incredibly short time. One of the finest, most productive, and most profitable peach orchards in the whole state of New-York, is only seven years old since setting out. No crop is raised among the trees, but the ground is kept clean and mellow by plowing and harrowing. A very celebrated fruit garden and orchard was planted by the proprietor after age had marked his hair with silvery whiteness; he has now for twenty years enjoyed the luxury of plentiful crops from his trees, and is still in the vigor of life. His success was chiefly owing to good transplanting—digging holes six feet in diameter, and filling them with fine rich earth—and to thorough cultivation of the soil for several subsequent years.

There are various degrees of good and bad treatment, which from their common or uncommon occurrence, deserve to be pointed out.

1. The worst of all is to transplant young trees to a meadow, and worst of all a clover meadow. An orchard of several hundred young peach trees was noticed last summer, which had been set out in a clover lot the previous spring or autumn, and though the trees appeared to have been of fine growth before transplanting, not one in twenty was alive. If it ever becomes necessary to set out young trees in meadow ground, each row must stand on a plowed strip of ground, at least seven feet wide, kept constantly clean and mellow.

2. Next to meadows, placing young trees among grain-crops sown broadcast, is the worst. They may, in such circumstances, survive removal, but it is impossible for them to make much growth. Young trees standing in well-hoed potato crops, have been observed to make *at least six times* greater length of growth in one season, than trees standing in wheat-fields. Corn, though greatly shading young trees by its tall growth, is far better than wheat, oats, or barley, in consequence of the hoeing and cultivation which is given.

3. The only crops which should be *tolerated*, are low, hoed crops, as potatoes, carrots, field beets, rutabagas, &c.

4. But the best mode altogether, is to keep the

ground clean and mellow for several feet distance (6 to 10,) from the young trees. All crops necessarily abstract the nourishment which should go to the tree, and prevent that thorough and constant stirring which should be given to the soil. Young trees, the past season, were found to have made nearly double the growth, where the soil was kept clean and unincumbered, compared with those which stood among well cultivated root crops.

While trees are yet young and small, the wide intermediate spaces between the rows may be cultivated with roots, leaving about one-third of the land in unoccupied strips next the trees. But when the trees become large, it is far best not to attempt the raising of any other than the fruit crop. If the trees are of good varieties, the increase in the amount borne, and in the quality and value, where the whole surface is left perfectly free for annual plowing and monthly harrowing, will many times overbalance the worth of any other crop which may be derived from the ground, to say nothing of the inconvenience resulting from treading down this other crop in gathering the fruit. T.

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The Hawley Apple.—In the Cultivator for April you have given a very correct description of the "Hawley or Douse apple," which, as you say, is one of the finest variety of apples which is cultivated. It is also said, "its origin appears, at present, to be unknown." This is a mistake, as will be seen by the following extract of a letter to E. A. Brown, Esq., of this village. The origin of this fruit, which has deservedly so high a rank in the estimation of all Horticulturists who are acquainted with it, will, I doubt not, be interesting to your readers. The letter is dated Canaan, Columbia county, April 7, 1847, and is written by Thos. Hawley, the grandson of Matthew Hawley, whose name the celebrated fruit bears:

"The given name of grand-father was Matthew Hawley. He was from Old Milford, Connecticut, and brought the seed with him, nearly 100 years ago, and planted it in a nursery. When he was setting out his orchard, he took up a little, crooked, scrubby, tree and set it along with the others. After he had finished setting his trees, and having some good ones left, in passing back by the crooked one they had set, my father observed to the old gentleman, we had better pull up this tree and set out a straight one in its place. My grand-father said, 'no, no, let it stand—I will drive up some stakes by it, and tie it up—it may bear good fruit.' The tree soon grew into a straight, thrifty one, and soon began to bear; and to their amazement the fruit was so early, large and fair, that it called people far and near to see and taste it. The body was large, not tall, and it spread its branches far and wide. My grand-father first grew this now celebrated apple, which is now cultivated in almost every orchard in town. The old tree has been dead about 12 years. The original name of the apple was 'Hawley,' which is the right name, and ought never to be changed. The original tree out-lived all the old folks, and then it died."

This delicious apple is a seedling from Old Connecticut, and was undoubtedly first grown by Matthew Hawley, of Columbia county, near 100 years ago. The name of Douse, as you suggest, has been given to it undoubtedly from the fact that a person of that name introduced somewhere the grafts from the old tree at Canaan. L. H. Redfield. *Syracuse, April* 23, 1847.

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False Names to Apples.—J. Dille, of Newark, O., says in the Ohio Cultivator, that he has found within five miles of his residence, four distinct apples with the name of Newtown pippin, three of Romanite, and two of Harrison.

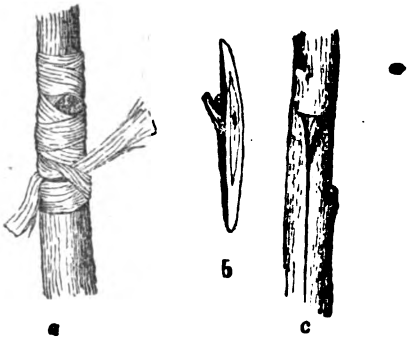

Fig. 36.

Buddings.—In compliance with the request of our correspondent J. B., we give herewith a cut and description of the process of budding, taken from Thomas' *Fruit Culturist.* The various parts of the operation are represented in fig. 36; *c*, the cut stock; *b*, the bud ready to insert; *a*, the whole after the ligature is applied.

"Budding is to be performed while the stock is in a state of vigorous growth, and while the bark will peel freely. An incision is made lengthwise through the bark of the stock, and a small cut at right angles at the top, the whole resembling the letter T. A bud is then taken from a shoot of the present year's growth, by shaving off the bark an inch or an inch and a half in length, with a small part of the wood directly beneath the bud. The edges of the bark at the incision in the stock are then raised a little, and the bud pushed downwards under the bark. A bandage of bass, corn-husk, or other substance, is then wrapped snugly, covering all parts but the bud; and even this may be covered if not very prominent, especially if the pressure be rather less than other parts. The pressure should be sufficient to keep the inserted portion closely to the stock, but not such as to bruise or cut the bark.

"When by growth the bandage cuts into the stock, usually in ten days to three weeks, it is to be removed. The bud remains dormant till the following spring, when the stock is cut off an inch or more above it. If cut closer the end of the stock sometimes dies and the bud perishes. All other buds must then be removed, and all the vigor of the stock thrown into the remaining bud, which immediately commences a rapid growth."

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Convention of Fruit Growers in Vermont.—Through the Cultivator I would propose to the farmers, gardeners, orchardists, nurserymen and all connoisseurs of good fruit, residents of Vermont, that they meet in convention called for the purpose of encouraging the cultivation and distributing the best native fruits of our State, and all foreign approved varieties.

Let them assemble at the most convenient time and place, and compare the merits of our best native apples, and such other fruits deemed worthy of encouragement. Fix on a list of such as are found to be the most valuable for general cultivation, exhibiting not only our native varieties, but those valuable kinds introduced from foreign countries. Also to collect and disseminate the best information on the cultivation and preservation of fruits and the orchard. Let all the yeomanry of the State come together, either personally or by town and county delegation, those who are interested in rearing or in *eating* choice fruit, for the purpose of interchanging their views, and make liberal exhibitions of such fruits as are worthy of encouragement.

There is no State in the Union that produces so much value from the orchard, according to its size or population, as Vermont We have thousands of native apple trees now in a bearing state—from this innumerable list a choice lot of seedling fruits may be selected worthy of cultivation, many of which will either become extinct, or let our generation pass off before they are generally introduced.

I notice in the Maine Farmer that a Society has been formed at Augusta for the purpose of encouraging the cultivation of good fruits—that an exhibition of many new and choice kinds were upon the ground. This Society will undoubtedly render that State and the world very essential service.

I would suggest and recommend that those friendly to the cause, meet at the capitol of our State, while the Legislature are in session, for the purpose of forming a Pomological Society, and make an exhibition of fruits. Those approving, let them express their views through the Cultivator, or any other channel which they may choose. I hope those who are most spirited and interested in growing fruit, and approve of the measure, will fix upon a time and place.

For many years we have not paid that attention to orcharding which the subject demands. Home consumption is sufficient protection and encouragement for the present, but we may soon expect to have foreign markets opened to us at the east and south by rail-way, which will command our surplus at remunerating prices. S. W. JEWETT. *Weybridge, Vt.*, 1847.

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BLIGHT IN PEAR TREES CURED.—Having noticed several articles in the Cultivator respecting the fire blight in pear trees, I will relate my treatment of a tree in my garden of about 2½ inches in diameter, during last summer. It was about the last of June that I first noticed the desease by the dropping of the leaves on one of the limbs, in about three days after the leaves turned black, which made me fear that I should lose my tree. I immediately examined Mr. Downing's work, and there found the only remedy was the cutting off the affected part, which I did. This stopped the disease as far as the limb was concerned ; but still the whole tree began to droop. which led me to examine farther, when I found the bark on the body of the tree to be entirely dead, and all cracked open for about 4 feet from the roots upwards. I then immediately prepared some ordinary grafting salve which I melted over a slow fire, and kept it warm till I whittled the whole of the dead bark off of the tree to the naked wood. I then applied two coats of said salve on the tree with a brush, dug about the roots, and left it. In about two weeks after, my tree revived ; the fruit, which had not grown for two weeks, commenced growing, and ripened well, except it was most of it stung or indented on one side. The pears were Virgalieu. My tree now has an entire new bark, and is as full of blossoms as can be, and in perfect health, at No. 48 Howard-street. A. VAN VOAST. *Albany, May* 13, 1847.

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GERMINATION OF SEEDS.—I noticed in the Cultivator for April, a method of ensuring the germination of small seeds. I prefer a different process, which is as follows : I take a piece of writing paper, five inches square, which I fold down or double in the middle ; I then tuck two of the sides into each other, so as to form a cylinder open at both ends, two and a half inches long and one and a half inches in diameter ; two pins keep the paper in proper form. I then place it on a shingle, and fill it with rich, moist loam, then carefully remove it to a plate. When the plate is full I sow the seeds, and supply water by pouring it into the plate. In a few days, especially if the plate be put under a stove, the seed will germinate. Care must be taken in placing the cylinder in the ground, that there are no interstices between its bottom and the bottom of the hole in which it is placed. If the hole be made by pressing a good dibble perpendicularly in well-stirred soil, there will be no danger of this. If larger cylinders be used, and they are oiled, tender plants may be forwarded and the striking of cuttings made certain. W. H. HAYWARD. *Salem, N. H., April*, 1847.

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PEACH GRUB.—Cultivators of the peach should examine their trees early for the peach worm. Its presence may be perceived at a glance by the exuding gum at the surface of the ground, mixed with the pulverized bark, resembling saw-dust. Clear the earth away, follow the worm-hole under the surface of the bark, to its termination, and the worm will be found, and may be at once destroyed. There is no other way of destroying this insect after it has once obtained possession. Air-slaked lime and leached ashes are useful in *preventing* its entrance, but by no means infallible. T.

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CRANBERRIES ON UPLAND.—In addition to statements heretofore published in the papers, the Prairie Farmer gives figures showing the relative sizes of fruit grown wild and on cultivated ground, showing the great superiority of the latter. In the cultivated cranberry the color was much more uniform, approaching at the blossom end to deep purple or black." "Most men in comparing the latter, would pronounce the cultivated fruit at least *three times* larger than the wild."

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PRODUCTIVE ORCHARD.—A correspondent of the Prairie Farmer, says, that an orchard of 300 apple trees, owned by Elijah Capps, of Fulton Co., Illinois, nineteen or twenty years old from the seed, produces now from 20 to 40 bushels per tree. Much of this success may doubtless be ascribed to the new and fertile soil of that country; but it might be nearly approximated further east, by deep, rich, highly manured soil, and constant and mellow cultivation.

CORN FOR FODDER.

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LET no farmer neglect at the proper season to sow a plentiful supply. Several years' experience enables the writer to say, that at least double the amount of the best fodder may thus be obtained from an acre, over any other known mode, and very often triple the amount. If most meadows which now produce scarcely a ton per acre, were plowed and planted in this way, they would scarcely fail to yield four tons of the best and finest cattle feed, and many would yield five or six tons.

The management of the crop, however, must be of the proper kind, or complete success cannot result. Never sow broadcast,—for this requires four or five bushels of seed per acre, to succeed well, is less productive, and does not leave the ground clean. Invariably sow in drills, as follows:—Furrow the land (after it is plowed and harrowed,) three feet apart, with a single-horse plow; scatter the seed thickly along these furrows from a hand-basket, so that there may be at least forty or fifty grains to the foot. Cover the seed by a two-horse harrow, run lengthwise or crosswise with the furrows, and the crop is in. The only after-culture consists in running the cultivator once or twice between the rows—all weeds will be shaded and destroyed by the crop—and the ground will be left early in autumn when the fodder is cut, as clean as a travelled road.

The seed may be sown any time during the early part of the present month—two bushels will be required per acre—and it may be harvested early in autumn, in time for a crop of wheat. The stalks should be stacked as dry as possible—in small stacks—and well salted—or injury by heating and mouldiness will follow. T.

Grant Thorburn has lately sent to the Emperor of Russia 10 lbs. potato seed at *twenty dollars per pound.*

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received, since our last, from J. D. Jones, A Sucker, Nelson, Mars, N., Buel Baldwin, L. H. Redfield, J. B., J. Townsend, Jona. Whitney, jr., F. Brand, J. Holden, T. G., S. J. Wheeler, A. M., H. A. Parsons, P., H. A. P., Prof. J. P. Norton, Caius, S. W. Johnson, A. Van Voast, Alfred Hall, John W. Burrass, (dated Nov. 18, 1846,) C. B. Wood, F. J. Scott, Prof. E. N. Horsford.

We are indebted to W. H. Hayward, Esq., Salem, N. H., for a paper of the "Ribbon-stalk Pea," noticed in our March number, page 95.

☞ We would invite attention to Dr. Close's communication in this number, in relation to a disease in cattle of a singular character. We can find nothing analagous to it in books, and have never before heard of such a disease except from one person. Payne Wingate, Esq., of Hallowell, Maine, stated to the writer several years ago, that he had known the loss of several animals whose appearances, as he described them, corresponded with those presented by the animals described by Dr. Close. We should feel obliged to friend Wingate for any suggestions in reference to this disease.

Three Steers of one Birth.—Col. Barker, of Clinton, Oneida county, lately exhibited in this city three fine steers, between four and five years old, produced at one birth. They were bred by John Fulmer, Esq., of Warren county, New Jersey. They weighed in March last 5,600 lbs., or an average of 1,866 lbs. each. They are very near of a size—there being only four pounds difference between two of them, and the other being only sixteen pounds heavier. Their shape is very good, and so near do they resemble each other in this respect, as well as in size and color, that ordinary observers can scarcely distinguish them. They are dull white, with a few small reddish spots. We understand the owner intends exhibiting them at the Saratoga Show in September.

Singular.—George Hezlep, Esq., of Gustavus, Ohio, informs us that a mare belonging to Mr. Joseph Cowden, of that town, has lately produced two foals at a birth, one of which is evidently a mule, and the other appears to be wholly of the horse species. The circumstances are stated to be that the mare was served by a horse, and "two days after" by a jack. If these animals, when fully developed, should correspond with the description now given of them, they will present an interesting circumstance to the naturalist. We would suggest, however, whether it is not somewhat probable that the diverse appearance of the foals may not be owing to a different cause from the one assigned. It is well known that offspring produced by an union of animals of different species, or widely differing varieties, are quite various in their characteristics. Some mules, for instance, bear more resemblance to the horse and others more to the ass. A cross between the Merino and the Leicester or the Cotswold sheep, shows a great diversity—some possessing the large horns and the short and thick fleece of their Spanish progenitors, while others exhibit in equally as striking a manner, the leading traits of their long-wooled parents. Even in a pair of *twin lambs* of this cross, we have seen such a marked difference that a cursory observer might suppose one to be purely Merino, and the other as purely Leicester. Now we would suggest that a sharp eye be kept on these foals, and as they approach maturity, see whether the assinine origin is not more or less exhibited in both. Should one prove fertile and the other barren, we should regard it as evidence in favor of the hypothesis of a different parentage.

We do not, however, deny that the animals in question may have originated as our correspondent has stated; but we deem the subject worthy a careful examination. We believe there is an account recorded, perhaps by Dr. Pallas, but to which we cannot now refer, of a bitch having had a litter of puppies, some of which appeared to belong to a greyhound, others to a terrier, and others to a bull-dog. But in the above case of the mare, there must have been, according to the account, a difference of two days in conception. We submit to our medical friends whether such a case should not be regarded as one of super-fœtation.

Coating for Houses and other Buildings.—Hon. H. L. Ellsworth gives us the following recipe:—6 lbs. of tallow, 1 bushel unslaked lime, 2 quarts salt, 2 lbs. borax—color with anything wished.

Agricultural School and Experimental Farm. During the late session of the legislature, several petitions were presented by the Farmer's Club of the American Institute, asking aid from the state for the establishment of an Agricultural School and Experimental Farm, to be placed under the care of the Institute. One of these petitions was referred to the committee on colleges, academies and schools, which, through their chairman, Mr. Burchard, reported a bill favorable to the prayer of the petitioners. The bill was not, however, acted on, but lays over to be called up at the adjourned session in September. What action will then be taken on it cannot be predicted.

Another report was made on the same petition, by Mr. Beckwith, chairman of the committee on agriculture. This report states that in the opinion of the committee, "the prayer of the petitioners ought not to be granted." The reasons given for this conclusion, are, in substance, that if such an institution is to be aided by the funds of the state, it should not be located "near a large city at an extreme part of the state," but in a more central situation; that the call on the state for funds, is made in advance of any demonstration on the part of the petitioners to procure aid and means from other sources."

The committee, however, recommend the study of agriculture by means of books, in the Normal School, and in the academies and local institutions which are already established and endowed in all parts of the state.

We do not propose at this time to discuss the principles set forth in either of these reports; but will merely remark that it is gratifying to see that the agricultural interest is steadily and surely advancing to the position which it is entitled to hold, and from which it will, at no distant period, exercise its due influence on our legislative councils. The first and principal step towards securing this object, is the proper education of the rising generation of agriculturists. We are confident that causes are now in operation which will ultimately produce the desired result. The language used by Mr. Beckwith, in closing his report, happily expresses our own views:

"We hope the day is not far distant, when an uneducated farmer will be as rare a person as an uneducated lawyer, physician, or minister. We mean, too, by an education, something more than a knowledge of the mere routine of the farm, and farming operations; we mean by the term, a mental training, by which the man who works amid the complicated arrangements of the subtle and refined agencies of nature, will be able to understand those arrangements and give direction to the laws which control them."

Cross-bred Fowls.—We have received from Mr. T. C. Abrahams, of West Troy, a pair of fowls, which are a cross of the English pheasant with the game fowl. We are aware that there are various opinions as to the feasibility of such a cross, but we think the circumstances under which these fowls were produced, decidedly settles the point. Mr. A. states that several of his first attempts failed, but on adopting the following course, he was entirely successful. He took some young chicks of the game fowl, and some, as nearly of the same size as possible, of the English pheasant, and put them in a pen together. As soon as the chickens were so old that the sex could be distinguished, the game cocks were all taken out, leaving with the pheasant cocks several of the game fowl pullets,—taking care to choose those which in color most nearly resembled the pheasant hen. The result was that at the proper age the pheasant cocks readily matched with the game hens, and the produce was the cross breed spoken of. Mr. A. kept them shut up, entirely separate from all other fowls, for *two years*, during which time they produced several broods, some of which were three-fourths blood pheasants. They are a beautiful stock, the males showing great courage and activity.

Mr. Abrahams showed us a cock and six hens from England, said to be a cross of the Chinese silver pheasant with the English game fowl. These are splendid birds—somewhat larger on the average than those produced from the English pheasant. The cock weighed seven pounds and a half, and is the most eagle-like bird of this description that we have lately seen.

Unburnt Brick.—In answer to the inquiry of "Ruralist," in the last number of the Cultivator, whether unburnt brick may be made in the autumn, and kept in an out-house for building in spring,—it is only necessary to state, that if made early enough in autumn to become well dried before winter, there can be no question that unburnt brick would keep as well piled up in an out-house, as standing in a wall exposed to the side-action of the weather, as in case of the newly built house, which it is well known is attended with no difficulty. T.

Trotting Horse for Canada.—B. Pomeroy, Esq., of Eastern township, Canada East, has lately purchased, in behalf of the Sherbrooke Agricultural Society, the entire horse *Logan*, formerly owned by Geo. M. Patchen, of Brooklyn, L. I. This horse is seven years old, and is half brother to the noted trotter *Cassius M. Clay*. Logan is of good size—weighing nearly 1,200 lbs.,—and from what we saw of him, appears to be a strong constitutioned, muscular, and powerful animal. We are told, (we did not see him trot,) that he can easily perform his mile in less than three minutes. We understand the price paid for this horse was $1000.

Bloody Murrain.—Hon. H. L. Ellsworth, now of Lafayette, Ind., informs us that the following recipe has proved a preventive of this disease in several sections where it has prevailed to a great extent:—Take two pints wood ashes and one pint clay, and knead them into lumps with salt and water. Lay the lumps where the cattle can lick them whenever they desire to do so.

The Race Horse American Eclipse.—The name of this celebrated horse is doubtless remembered by many of our readers; though but few of them, perhaps, are aware that he is still living. In the *Louisville* (Ky.) *Journal*, of April 7th, last, we notice an advertisement of him. It appears that he is owned by Jilson Yates, and will be kept for the season at his stable, in Shelbyville, Ky. From an article written by his former owner, C. W. Van Ranst, published in *Am. Turf Register*, vol. III, it appears that Eclipse was foaled on the 25th of May, 1814, at Dosoris, Long Island. Consequently, he is now *thirty-three* years old. He is said to be in fine health and condition, and as sprightly as a colt." His great race with Henry took place on the 27th of May, 1823—24 years ago.

Report on Horses.—An error having occurred in the publication of the Report on Horses at the last State Fair, published in the Cultivator for October last, we give the following extract from the Report, to set the matter right:—"The committee having found some difficulty in bringing colts into fair competition with horses of mature age, respectfully recommend the following uncommonly fine animals to the Society, for extra premiums:

1st. "Perfection," three years old, owned by Geo Fordon, Geneva.

2d. "Black Prince," three years old, owned by Reuben Teft, Chemung Co.

3d. "Golden Farmer," two years old, owned by Cyrus Breed, Oswego Co.

Good Sheep for the West.—Mr. S. M. West has taken to Seneca county, Ohio, forty yearling Merino rams, from the flock of J. S. Pettibone, Esq., of Manchester, Vt. Having had an opportunity of seeing these sheep while on their journey, we can pronounce them a good lot. We are told that they were not *selected*, but comprise all the rams which Mr. Pettibone had on hand of the produce of last season. They therefore exhibit more fairly the character of the whole flock. They are well formed, have good constitutions, and their bodies are well covered with soft, white wool, of extra length for so fine a staple, and very free from gum. Some notices of Mr. P.'s flock have before appeared in our columns. He has furnished us with a memorandum of his last year's clip of wool, from which it appears that he sheared 350 sheep, the fleeces of which averaged 4 lbs. 1 oz. each, "without loss," and were sold at *forty cents* per pound to Mr. Harrington of Troy, for a manufacturer in Templeton, Mass. Mr. West's destination is Adams township, about six 'miles from Tiffin, Ohio. We have no doubt that his stock will be an acquisition to that section.

Offer.—Mr. Thomas Noble, of Massilon, Ohio, well known as the owner of one of the best flocks of fine-wooled sheep in the country, offers, through the *Ohio Cultivator*, *two hundred dollars* for a Merino ram that will produce a fleece of five pounds "net wool" of one year's growth—the quality to be equal to the average of his own "Merino stock bucks." The animal offered is to be given into Mr. Noble's possession immediately after shearing, and he is to give a guaranty "that he shall be kindly cared for twelve months"—the fleece to be properly cleansed, weighed, &c.

Humbuggery—Another Case.—We have heard that a man in Newfane, Vt., claims to have Alpacas, and that he has sold some animals under that name, at very high prices. He states, we are informed, that he purchased the stock of "Mr. Brackett, of Bolton," at the Worcester (Mass.) Cattle Show, in 1844. We *happened* to attend that exhibition, but neither saw nor heard of any Alpacas being there. We saw, however, some shaggy-fleeced *African sheep*, which we spoke of in our account of the show. On turning to the Transactions of the Worcester Ag. Society for that year, we find it stated that Mr. Thomas S. Brackett, of Bolton, presented for exhibition "his African sheep, which were of a novel character and appearance." These then, are the *Alpacas*, for which some "green horns" have paid dear.

Wool Depot.—We would call attention to the advertisement of Mr. Blanchard in regard to his wool depot

We believe the general establishment of such depots will prove useful both to the wool-grower and manufacturer, and we are glad to hear that Mr. B. has thus far succeeded to the full extent of his anticipations.

Subsoil Plowing.—H. N. Gillet, in the Ohio Cultivator, in speaking of the importance of subsoiling, notices the hard stratum of earth, a few inches below the surface, "almost impervious to water, and impenetrable to the roots of plants, occasioned by the pressure of the bottom of the plow and the tread of the furrow horse, for a long series of years. The importance of admitting the roots to the subsoil, was strikingly shown by an experiment in digging a well, where a deep bed of the subsoil produced ears of corn 22 inches in length, which, he says, "were 6 inches longer than I ever saw, and 4 inches longer that I ever heard or read of." Subsoils vary in fertility, and experiment must be resorted to, to prove their relative value.

ANSWERS TO INQUIRIES.

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Root-Cutters—Churn.—N., Nelson county, Va. The best kind of root or vegetable cutter made in this country, so far as we are acquainted, is that made by Messrs. **Ruggles, Nourse & Mason**, Worcester, Mass., mentioned in our January number. The price is $12. For a churn we should prefer either **Kendall's** or **Galt's**. The various sizes of Kendall's were spoken of in our March number, page 98. The price of Galt's is $2, $2.50, $3, $3.75, $4.50, according to size. The largest will answer for a dairy of 40 cows. All these implements are for sale at the Albany Agricultural Warehouse. As to the cost of transportation to Richmond, it would probably be from fifty to seventy-five cents each.

Rat-proof Granaries.—W. F. B., Davidsonville, Md. The usual way of protecting granaries from rats, is to place the building on posts two or three feet high, with flat stones two feet (or more) square, on the top of the posts. Suitable stones should be placed at the bottom of the posts, to afford a firm foundation. A granary thus protected, will be free from rats and mice, unless they are *carried* in by some means. Where stones cannot be had, we have seen shallow tin pans, bottom upwards, used instead, with good advantage.

Hay-Caps.—J. H., Warwick Neck, R. I. Hay-caps are made in a very simple way. Four posts, about six by eight inches square, are set up at about ten to twelve feet apart. A square roof, as it is called, that is, one having four sides, is made to fit these posts, and it is kept in place, and may be raised or lowered at will, pins to support it being put through the posts. Pine, spruce, or cedar, are best for the posts. A rough foundation should be laid on the ground before filling the cap, to keep the hay from the ground.

Horse-power—Lucerne.—T. B., Pleasant Hill, Alabama. We do not know whether **Warren's** horse-power would be adapted to working cotton-gins or not. We think it probable, however, that it would give the requisite speed—which you state to be "300 revolutions per minute, with an 8-inch wheel upon the gin, and a walk of the horse." There are other machines which it might be well for you to examine—as **Hall's**, (see Cultivator for '44, p. 344,) and **Taplin's**, (same vol., p. 377.)—Lucerne seed can be had by the quantity at 30 cents per lb. If it is sown broadcast, and without any other seed, 12 lbs. is recommended per acre. If sown in drills, 8 inches apart, 3 lbs. is sufficient. We cannot tell what quantity of seed an acre will produce.

Prices of Rams.—J. McG., Charlotte, Me. We hardly know what kind of a ram to recommend for the purpose of improving your flock, "both in mutton and wool." The best mutton sheep do not produce *fine* wool. If you wish for a medium sort of sheep, as your question seems to imply, we think an improved Cotswold or good Licester ram would suit. The price of one here would be from ten to fifteen dollars, and the cost of transportation to Eastport, *via* railroad to Boston, would probably be from two to three dollars, freight and charges included.

Guano.—W. C., Federalsburg, Md. About 200 bushels of guano to the acre is a medium quantity. It is spread on the surface and harrowed in for corn as well as other crops.

NOTICES OF NEW PUBLICATIONS.

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A Report on the Trees and Shrubs growing naturally in the Forests of Massachusetts: published agreeably to an order of the Legislature, by the Commissioners on the Zoological and Botanical Survey of the State.

The author of this report is **Geo. B. Emerson**, Esq., a gentleman well known for the efficient aid he has rendered the cause of education. The leading object of the work appears to be to describe the trees and shrubs growing naturally in Massachusetts in relation to their economical uses, and to present the modes by which they may be most successfully preserved, propagated and improved. The author informs us that it was not written for men of science—though such may find in it many particulars not before recorded—but for the "common, unlearned citizens who live on farms in the country, and have few books and little leisure." We are certain that the volume contains a large amount of useful information. The descriptions are exceedingly well given, in language readily understood by all. The author informs us that "every important tree and shrub has been described from copious notes taken under or near the growing plant itself." We shall at another time present a more extended notice of the contents of this valuable book.

Abstract from the Returns of Agricultural Societies in Massachusetts for the year 1846: by **John G. Palfrey**, Secretary of the Commonwealth. **Dutton & Wentworth**, Boston.

This work embodies the principal information in relation to agricultural concerns, which has been brought out by the various agricultural societies in Massachusetts during the last year. On looking over the pages we find some interesting facts, though we have not room to refer to them particularly at this time.

It appears the State Ag. Society of Massachusetts have taken active measures for the promotion of knowledge in reference to the anatomy and diseases of animals. They have purchased in Paris, at a cost of $800, a figure of a horse of full size, so constructed that it may be taken to pieces, and will accurately represent the muscles, blood-vessels, heart, lungs and other organs, of their natural size and appearance. They have also directed the preparation of full-sized skeletons of the horse and ox. They have engaged Dr. **Brooks** to give a course of lectures on the diseases of the horse, which it is expected will be given next winter.

The following remarks on plowing and plowing-matches, which we find under the head of re-prints from the Essex Agricultural Society, we commend to the special attention of committees or judges appointed on such occasions:

"It is not useful at a plowing-match to attempt a display of work such as a good farmer would not approve on his own farm. What we want is that kind of work which would be most valuable when applied upon the same kind of land in the ordinary process of cultivation. * * * In judging of plowing, we think it proper to notice the form of the plow used; the condition of the cattle; the manner in which they work: the skill with which the plow is used; the size and position of the furrow-slice; and combining the considerations connected with each and all these points, without attaching undue importance to any one of them, to approve that work the best which would be most worthy of imitation on a farm."

A Manual of the Principles of Road-Making: comprising the Location, Construction and Improvement of Roads, (common, macadam, paved, plank, etc.) and Railroads: by W. M. Gillespie, A. M., C. E., Professor of Civil Engineering in Union College—pp. 336. New-York, A. S. Barnes & Co.

The author of this work has supplied a desideratum which has long existed. Perhaps there is no subject on which information is more needed by the country in general, than on that of road-making. To be satisfied of this, it is only necessary to notice the miserable manner in which a large portion of our roads are constructed. The author of this volume opens by stating that "the roads of a country are accurate and certain tests of the degree of its civilization." Whether this is or is not admitted in its broadest sense, we think it true that the character of a community as to enterprise, public spirit, and even intelligence, is generally judged of by the condition of its public roads. Mr. **Gillespie** has taken up the subject in a proper manner—beginning the work at the right place, and prosecuting it in systematic order to its completion. He first tells "what roads ought to be," as to their direction, their slopes, cross-section, surface, cost; next, the "location of roads," arrangement of hills, valleys, and water-courses, with directions for surveying, mapping, establishing grades, calculating excavations, embankments, &c. The next chapter is on the "construction of roads," in which all the details in regard to earth-work and mechanical structures, such as bridges culverts and drains are given. The next chapter describes the manner of making the different kinds of roads, as earth roads, gravel roads, broken-stone roads, paved roads, roads of wood, &c. Next follows a chapter on the construction of railroads. The closing portion of the work is devoted to a discussion of the present road system, in which its defects are shown and a new system proposed. The book is for sale by E. H. **Pease** and by **Steele & Durrie**, Albany.

AGRICULTURAL SOCIETIES.

New-York State Society.—We have not room for the proceedings of the Executive Committee, at their April meeting. Among the most important of its proceedings, we consider the arrangement with Dr. **Fitch**, of Salem, for a thorough Agricultural Survey of Washington county, to be published in the Society's Transactions for 1847. From the peculiar qualifications of Dr. **Fitch** for the undertaking, and his untiring industry, we anticipate a report which will serve for a pattern for the surveys of other counties. The premiums on Butter Dairies were increased so as to correspond with those on cheese, viz: 1st, $50—2d, $30—3d, $20. Letters were read from gentlemen in different parts of the state, and several donations of books, samples of grain, &c., acknowledged. The Secretary was ordered to procure some one to prepare a memoir of the late **Willis Gaylord**, and a committee appointed on the subject of the removal of the remains of the late **Judge Buel**, to the new Rural Cemetery. The next meeting of the executive committee is to be held at the United States Hotel, Saratoga Springs, on Thursday, the 3d day of June next, at 12 o'clock at noon, at which time Judges and committees will be appointed, and arrangements made for the Cattle Show and Fair.

Persons in western New-York who have not received diplomas and premiums awarded at the State Fair at Auburn, will please notify J. **Alleyn**, at the office of the city Treasurer, Rochester.

Rhode-Island Society for the Encouragement of Domestic Industry.—We have received a list of premiums offered by this Society for 1847. We notice that a large portion of the money is offered for making experiments on various subjects, and if the experiments are properly conducted, the results will prove of great utility.

Worcester County, Mass.—This long established and most useful Agricultural Society, held its meeting for the choice of officers, at Worcester, on the 17th April, when the Hon. **Levi Lincoln**, who, we believe, has been at the head of the Society for nearly thirty years, was re-appointed President; and John Brooks, of Princeton, and George Dewey, of Westboro, Vice-Presidents; John W. Lincoln, Cor., and Wm. S. Lincoln, Worcester, Rec. Secretaries; Anthony Chase, Treasurer. A Board of Trustees, consisting of 172 persons, located in the different towns of the county, was also appointed.

Burlington County, N. J.—An Ag. Society was organized in this county, by a meeting held at Mount Holley on the 13th of April. After the adoption of the constitution, Dr. **Jona. I. Spencer**, of Morestown, was chosen President; Wm. N. Shinn, Isaac V. Brown, Charles Collins, and Levi Barton, Vice-Presidents; Joseph F. Burr, Rec. and C. Gillingham, Cor. Sec'y; and C. M. Harker, Treasurer. A Fair is to be held in October next.

Chittenden County, Vt.—The Fair of this Society is to be held on the 22d of September. The list of premiums amounts to $618. For list of officers, see March number, p. 96. This society distributes among its members 200 copies of the Cultivator.

Lamoille County, Vt.—An Ag. Society has recently been formed in this county, which will hold its first exhibition at Hyde Park, on the 28th Sept. next. Ariel Hunton, President; and Carlos S. Nores, Sec'y.

The **Provincial Ag. Society** of Canada West, will hold their next great Exhibition at Hamilton, on the 6th and 7th of October next. The premium list is about equal to that of our State Ag. Society, previous to the present year, amounting in cash premiums to nearly $2,500, together with 300 volumes of works on Agriculture and Horticulture. E. W. Thomson, Esq., of Toronto, is President, and W. G. Edmundson, Toronto, Secretary.

Windsor County, Vt.—We have been favored with the Premium List of this Society for 1847, the Fair to be held at Woodstock, on the 7th of October. The Premium List embraces a great variety of articles, and amounts to near $800. For officers of this society, see March number, p. 96.

Queens County, N. Y.—We are indebted to A. G. Carll, Esq., Secretary of this society, for its list of premiums, to be awarded in October next, embracing, to a great extent, the products of the farm, orchard, and garden.

Yates County, N. Y.—At the annual meeting of the society in this county, **Charles Lee**, of Milo, was chosen President; Artemas Bigelow, Sec'y, and F. A. Stebbins, Treas. A Vice-President and member of the Board, was also chosen from each town in the county.

☞ We have received from **Rodman Sisson**, Esq., of Abington, Luzerne Co., Pa., a parcel of apples, comprising handsome specimens of the Rhode Island Greening, Belle-flower, and several kinds of sweet apples. Also, a sample of maple sugar, of a quality rarely equalled, although it is, as we are informed, only a fair specimen of the whole quantity, (several hundred pounds,) manufactured by him the present season.

Hogs in the United States.—The Genesee Farmer says that "the *hog crop* in the United States, this past year, is three times the worth of the cotton crop. The 'standing army' of swine consumes annually two hundred millions of bushels of corn."

THE SEASON AND THE CROPS.

The spring has been unusually backward, the weather having been generally cold till about the 8th of May. Since that time it has been moderately warm. Blossoms of most fruit-trees and shrubs make a good show, and the prospect for fruit may be considered fair, unless unusually late frosts should occur. As to winter grain, the accounts we receive are not very definite. The papers of the western states, in some instances, speak of the wheat having been injured by the winter, and we hear some complaints of this kind from the south. The grass crop appears well, and with seasonable rains will be abundant. The late period at which the spring opened, has obliged farmers to do their work in considerable hurry; but should we now have constantly favorable weather, we consider the farmer's prospects not less flattering than in ordinary seasons.

Extracts from letters to the Editors of the Cultivator:

Davidsonville, Md., April 16—"Wheat crops in this part of Maryland have suffered much from the unfavorable winter. Some planters have abandoned tobacco for a while—nearly every one has lessened his crop, and increased that of Indian corn."

Bucks County, Pa., April 30.—"The weather is cold, and the ground very dry, having had but little rain for near four weeks, and very high winds most of the time. Grass is very backward, and the roots are much injured by the winter. Wheat looks very bad, and some have plowed up their grain fields and sowed them with oats, and several more might as well do the same. The present appearance is very poor for a wheat crop in the eastern part of Pennsylvania."

PRICES OF AGRICULTURAL PRODUCTS.

New-York, May 19, 1847.

FLOUR—Genesee, per bbl., $8.35*a*$8.37½. Market large, exceeding the landing—sales 15,000 bbls., closing firm at latter quotations.

GRAIN—Corn, Northern yellow, per bushel of 56 lbs., $1 02—Rye, $1.15*a*$1.18—Oats, 56c.—Wheat in demand and but a small supply. Sales of red Ohio at $1.75—Barley in demand, but none offering.

BUTTER—Orange County, per lb., 22c.—good Western, 18*a*20 cents

CHEESE—Per lb., 7*a*8c.

BEEF—Mess, per bbl., $11.50*a*$12.25—Prime, $8.50*a*$9.25.

PORK—Mess, per bbl., $15.12½—Prime, $13.12½. Market tending upwards.

HAMS—per lb., 8¾*a*9¼ cts.

LARD—Per lb. in kegs, 9½*a*10c. Sales dull.

HEMP—Russia, clean, per ton, $245—Manilla, $190*a*$200.

HOPS—Per lb., 8*a*9c.

COTTON—New Orleans and Alabama per lb., 5¾*a*9c.—Florida, 5¾*a*8c.—Upland, 5⅝*a*7½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, washed per lb.	45*a*50	cts.
American full blood fleeces,	40*a*45	"
" three-fourths blood fleeces,	33*a*37	"
" half blood do	30*a*32	"
" one-fourth blood and common,	28*a*30	"

REMARKS—Since the arrival of the Britannia at Boston on the 17th, the market for breadstuffs has been tending upward, an effect which is in part attributed to the small arrivals from the west, which are not sufficient to meet the demand. Our accounts from Europe represent the scarcity as great as heretofore, and there is little doubt that there will be a firm demand for our produce for some time to come. In England, there is evidently but little grain on hand, and it appears that they have but little hope of obtaining supplies except from the United States. The *Mark Lane Express* observes—"Many of the countries to which we are in the habit of looking for supplies, when our own crops turn out defective, are in a worse position than ourselves; indeed the scarcity of breadstuffs may be said to be almost universal over the whole of Europe, and it may well admit of doubt whether the surplus growth of America, great as are her resources, will be found sufficient to make good such extensive wants."

GUANO.

200 TONS Ichaboe Guano, balance ship Shakspeare's cargo, the best ever imported in the country, for sale in lots to suit purchasers, by E. K. COLLINS, 56 South-st.
April 1.—tf.

HORSE RAKES.

WILCOX'S Revolving Horse Rakes, which has taken the premiums at most of the New England Fairs, for sale at the Albany Ag. Warehouse and Seed Store—price $7 and $8.
May 1, 1847. L. TUCKER.

HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing, Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price, $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.
June 1, 1847. LUTHER TUCKER.

CHEAP PLOWS.

SINGLE-Horse Plows, from $2.00 to $3 00 each;
Double-Horse " " $3.00 to $6.00 "
The woods of these plows are made of the best of *white oak*. The handles are *steamed* and then *bent crooked*, instead of being sawed out. This makes them much stronger and more durable. The castings are made from good *new pig iron*, without any admixture of *old scrap*. The wrought iron work is of excellent quality, with *extras* attached to the plows. A liberal discount to dealers.
A. B. ALLEN & Co., 187 Water-street, N. Y.
March 1—3t.

AG. WAREHOUSE AND SEED STORE,
Nos. 10 and 12 Green-st., Albany.

FOR sale, at all times, at the above establishment, all kinds of Agricultural and Horticultural Tools, Implements, and Machines, from the best manufacturers, and at as low prices as at any establishment in the country.
Plows of all kinds and sizes;
Harrows and Cultivators, of different kinds;
Manure Forks, Shovels, Spades, Hoes;
Horse Powers and Threshing Machines;
Corn Shellers, Straw Cutters, Corn and Cob Mills;
Drill Barrows and Corn Planters;
Fitzgerald's Portable Burr Stone Mills;
Harvesting and Haying Tools of all kinks;
Ox Yokes and Bows, Draft, Tie-up, and other chains;
Grant's and other Fanning Mills.
Garden Rollers, Ladies' Weeding Trowels, Grass Shears, French pattern, Border Shears, Garden Reels and Lines, Budding and Pruning Knives, Garden Rakes, Hay Knives, Transplanting Trowels, Pruning Saws, various kinds, Bark Mills, Sugar Mills, Bush and Bill Hooks, Root or Vegetable Cutters, Bull Rings, Axes and Hatchets, Patent Axe Handles, Wheelbarrows, Anti-Friction Rollers, Ship Scrapers, Spinning Wheels, Reels, Smith's Corn Sheller, Burrall's Corn Sheller, &c.
Churns, Cheese Presses, Tubs, and Pails, &c., &c.
Together with a general assortment of Field, Garden, and Flower Seeds, Seed Corn, Choice Potatoes, &c., &c.
April 1. LUTHER TUCKER.

POUDDRETTE.

THE Lodi Manufacturing Company offer their Poudrette for sale the following season at *reduced* prices, viz: In barrels delivered free of cartage, at any wharf or place in the city of New-York, at the rate of $1.50 per barrel, for any quantity over 7 bbls.; (under 7 bbls., $1 75.) In *bulk*, at the factory, on the Hackensack river, where vessels drawing 8 feet of water can come, it will be delivered at the rate of 25 cents per bushel. Planting 4 feet apart, each way, 2 barrels or 8 bushels of Poudrette will effectually manure an acre of corn, and will vie in cheapness and efficiency with any manure now in use.

Apply by letter *post-paid*, to the "LODI MANUFACTURING CO.," New-York, or to James B. Cox, Agent, No. 90 West-st.
April 1—3t.

PLOWS! PLOWS!!

THE attention of Farmers and Dealers is particularly invited to our assortment of Farming Tools—among which may be found a complete assortment of the most approved as well as common plows, including all sizes of the Center Draft, Side-Hill, Subsoil, Self-Sharpening Plows, from Messrs Prouty & Mears, of Boston. Also, the Eagle, Subsoil, Side-Hill, Self-Sharpening, and others, from Messrs. Ruggles, Nourse & Mason, of Worcester, Mass. Also, the Peekskill Plow, all sizes, from Minor & Horton, of Peekskill, N. Y., and Delano's Diamond Plow—all for sale at the manufacturers' home prices, and warranted. The adjustable Steel Point Self-Sharpening Plows, from the factory of Messrs. Ruggles, Nourse & Mason, is just received. This is a new improvement in the wearing parts of the plow, and has several advantages over the common plows in use. (See R. & N.'s advertisement.) Also on hand Cultivators, Harrows, Seed-Sowers, and Planters, Ox-Shovels or Scrapers, Field Rollers, &c., &c., &c., at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany, N. Y. L. TUCKER.

TO NEW-YORK FARMERS AND EMIGRANTS.

ONE hundred and fifteen thousand acres Illinois Lands for sale, in tracts of 40, 80, 120, 160 acres, or more, to suit purchasers. The lands are all first rate, and among the very best in the state, and are situated in the counties most densely settled, viz., Morgan, Scott, Cass, Mason, Menard, Green, Sangamon, Logan, Christian, Mason, McLean, Woodford, and Macoupin. To actual settlers every reasonable indulgence will be given as to time of payment. The price from $3 to $5 per acre.

A correspondent of one of the New-York papers, writes respecting this section of Illinois as follows:

" *Beardstown, Cass Co., Ill., Jan.* 10, 1846.

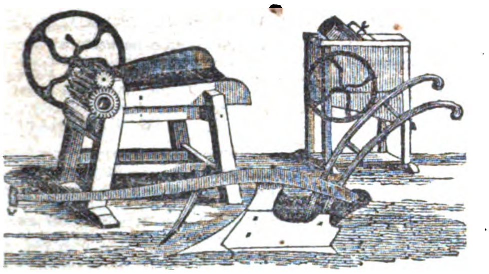
THE RICHES OF THE WEST.—GOTHAMITES ON THE WING.—It is now six weeks since I left the city of Gotham, during which time I have seen considerable of this western country, and I must say the beautiful prairies of Illinois, far exceed what I had anticipated, and this country may truly be called the garden of the world. There is nothing to prevent farmers in this country from getting rich, as the land is the most fertile in the world, and it will produce everything grown in the vegetable kingdom.

" A New England man would hardly believe me if I tell him that some farmers here produce ten thousand bushels of corn, and half as many bushels of wheat in a year, to say nothing of cattle and hogs, of which some raise as many as five hundred head. One farmer told me that he raised the last year 6000 bushels of corn, and it was all produced by the labor of two men only.

" Cattle and sheep feed upon the prairies all winter, as they are seldom covered with snow."

Most of the above lands may be cultivated 100 years or more without manuring, being of the richest alluvial soil. The titles are indisputable, and the lands will be sold at low prices and in quantities to suit purchasers. Letters (post paid) addressed to D. B. AYERS, Esq., of Jacksonville, Ill., or the subscriber, will receive prompt attention. As many persons out of the state have an idea that the taxes are very burdensome in Illinois, we state that they range from $1.50 to $2.00 per annum, on 80 acres of land.

JOHN GRIGG,
Jan. 1, 1847.—6t No 9 North Fourth-st., Philadelphia.



JOHN MAYHER & CO.

U. STATES AGRICULTURAL WAREHOUSE,

No. 195 Front-street, (near Fulton,) New-York.

Foundry and Machine Shop 502 *and* 504 *Water-st.*

THE subscribers respectfully invite the attention of Merchants and Dealers in AGRICULTURAL IMPLEMENTS to the superior assortment of goods which they manufacture, embracing Plows and Castings of the most approved kinds in use, and possessing all the latest improvements in style, workmanship, and material, among which are the following articles, that can be seen a their warehouse:

Pitts' Corn and Cob Crusher, Price, $40
Sinclair's do.—hand or horse. $30
Fitzgerald's Patent Burr Stone Corn Mill, $60
Sinclair's Cast Plate Corn Mill, $40
Swift's Corn, Coffee, and Drug Mill, $6 to $8
Hovey's far-famed Hay, Straw, and Stalk Cutter;
Sinclair's Hay, Straw, and Stalk Cutter;
Greene's do. do. do.
Mayher & Co.'s do. do.
Langdon's do. do. do.
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Boston Centre Draught Premium Plows,
Bergen's Self-Sharpening Plows;
Dutcher's Plows of all kinds;
Hitchcock's do. do.
Freeborn's do. do.
Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price, $55
do. do. 4 do. $75
do. do. 2 Thresher, $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
Warren's do. do.
Sinclair's Corn Sheller and Husker;
Pitt's Horse Power and Threshing Machine;
E. Whitman's Jr., Thresher and Separator;
Subsoil Plows of different kinds.

Cultivators, Wheelbarrows, Canal Barrows, Store Trucks, Horse and Ox Carts, Mule Wagons, Ox-Yokes and Bows, Hames, Trace and Ox Chains, Road Scrapers, Ground Augurs, Shovels, Spades, Pick Axes, Hay and Manure Forks, Rakes, Hoes, Scythes, Scythe Snathes, Grain Cradles, Crow Bars, &c., &c., all of which will be sold as cheap as they can be bought at any other store in the city, and are warranted.

Gin Gear, Segments, Rag Wheels, &c.

Castings of all kinds made to order. March 1, 1847—tf.

STOCK FOR SALE.

MATCH and single Horses, some of which can trot their mile under three minutes, others rack and gallop easily, making admirable saddle-horses for ladies and gentlemen; Durham, Devon, Hereford, and Ayrshire Cattle; Merino, Saxon, South-Down, and Leicester Sheep: the large white English breed of Swine, Berkshires, Poultry, &c., &c. Apply to

A. B. ALLEN, 187 Water-Street, New-York.
March 1, 1847—tf.

SENECA LAKE.

A BEAUTIFUL FARM for sale, lying on the east side of the Seneca Lake, Seneca Co., N. Y., about 7 miles south of Geneva, containing about 159 acres of the best quality of land There is about 50 acres of excellent wood and timber land, and the arable and meadow land is of the best quality and in good condition. Lowest price $50 per acre. The one-half of the purchase money may remain on bond and mortgage for many years. Title good The farm may be viewed at any time. Apply to RICHARD DEY on the premises, or to JAMES R. DEY, No. 51 Liberty-st., New-York, or to JACOB C. DEY, Fulton-st., Brooklyn.

Fayette, March 1, 1847—3t.

A BOOK FOR EVERY FARMER.

JOHN P. JEWETT & Co., 23 *Cornhill, Boston*,

HAVE just published one of the most valuable works for farmers ever issued from the American press, entitled

THE AMERICAN VETERINARIAN, or DISEASES OF DOMESTIC ANIMALS,

showing the causes, symptoms, and remedies, and rules for restoring and preserving health by good management, with directions for training and breeding. By S. W. Cole, editor Agricultural department Boston Cultivator.

Mr. Cole has spent several years in compiling and testing the facts he now offers to the farmers of this country. He has produced a work of great value to every man who keeps but a single horse or cow, but to the practical farmer its value can hardly be over estimated. The whole subject of the *Treatment of Domestic Animals*, is treated in the most thorough manner, comprising the Horse, Ox, Cow, Sheep, Hogs, Dogs, Hens, Turkeys, Geese, Ducks, Birds, Bees, &c., &c. The whole is compressed into one volume of 288 closely printed pages, with 7 beautiful wood engravings, firmly bound in leather. To be sold at the low price of 50 cts., in order to bring it within the means of every man. No pains or expense have been spared on the part of the author or the publishers, to produce a work worthy a place in every Farmer's library.

For sale at the office of " THE CULTIVATOR," and at the principal Book and Agricultural Stores in the country.

JOHN P. JEWETT & Co.

AGENCY FOR PATENTS,

Washington, D. C.

ZENAS C. ROBBINS, Mechanical Engineer, and Agent for procuring Patents, will prepare the necessary drawings and papers for applicants for Patents, and transact all other business in the line of his profession at the Patent Office. He can be consulted on all questions relating to the Patent laws, and decisions in the United States or Europe. Persons at a distance, desirous of having examinations made at the Patent Office, prior to making application for a patent, may forward, (post-paid, enclosing a fee of five dollars,) a clear statement of their case, when immediate attention will be given to it, and all the information that could be obtained by a visit of the applicant in person, promptly communicated.

All letters on business *must be* post paid, and contain a suitable fee, where a written opinion is required.

Office on F. street, opposite the Patent Office.

He has the honor of referring, by permission, to
Hon. Edmumd Burke, Commissioner of Patents;
Hon. H. L. Ellsworth, late " "
H. Knowles, Machinest, Patent Office;
Judge Cranch, Washington, D. C.;
Hon. R. Choate, Massachusetts, U. S. Senate;
Hon. W. Allen, Ohio;
Hon. J. B. Bowlin, M. C., Missouri;
Hon. Willis Hall, New-York;
Hon. Robert Smith, M. C., Illinois;
Hon. S. Breese U. S. Senate;
Hon. J. H. Relfe, M. C., Missouri;
Capt. H. M. Shreeve, Missouri.

May 1, 1847—3t.

THE OLD MORGAN GIFFORD HORSE,

SO well known in Vermont and New Hampshire as the highest blooded Morgan stallion now remaining, will be found the coming season at the subscriber's stable, in Walpole, N. H.

Terms—$15, of which $5 is to be paid at the time of service, and the remaining 10 if the mare proves in foal. Pasturing will be provided for mares from a distance, and the necessary attention given them. Accidents and escapes at the risk of the owners. A cut of this horse may be seen in the Sept. No., 1846, of the Cultivator.

FREDERICK A. WIER.
Walpole, N. H., March 9, 1847.—3t.*

THE ENTIRE HORSE,

MORSE'S GREY, or "NORMAN," will stand for the present season at the stable of JAMES RICE, at Germondville, three miles north of Lansingburgh.

CALVIN MORSE.
Lansingburgh, May 1, 1847—2t.

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HAY AND HARVESTING TOOLS.

REVOLVING HORSE RAKES.—These valuable implements save a great amount of labor—a man and horse being able to perform as much with one of them as eight men could do with hand rakes. Those offered are of the most approved construction.

GRAIN CRADLES, of very neat and superior construction. Also, GRAIN AND GRASS SCYTHES, of all kinds.

HAY FORKS.—Partridge's spring-tempered—the neatest, handiest, and best forks in the world. For sale at the Albany Ag. Warehouse and Seed Store, No. 10 Green-st.

June 1. LUTHER TUCKER.

DAIRY UTENSILS.

CHURNS.—Kendall's and Galt's—admitted to be the best kinds in use, both as regards the time required for producing butter, and the ease with which they may be operated.

CHEESE PRESSES.—Collins & Stone's Self-Acting, which presses the cheese by its own weight, is considered by all who have tried it, superior to any other kind. It is a light, portable article, and may be readily lifted by one person. For sale at the Albany Ag. Warehouse, No. 10 Green-St.

June 1. LUTHER TUCKER.

PERFECTION AND YOUNG ALFRED

WILL stand the ensuing season at my stable, 3 miles southwest of Geneva

Terms—Perfection, $10 by the season. Young Alfred, $6. Insurance to be agreed upon.

Pasturing will be provided for mares from a distance, and attention given them. Accidents and escapes at the risk of the owners.

PEDIGREE.—Perfection.—Sire, imported horse Alfred; dam, imported mare Blossom. To Perfection was awarded, at the late State Fair, a discretionnary premium for the best 3 years old, in the 1st class—also the first premium in Ontario Co.

Young Alfred's dam drew the 1st premium at the State and County Fairs, in 1845. GEORGE FORDON.

June 1—2t*

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks and ewes—of undoubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk. R. J. JONES.

Cornwall, Vt., June 1, 1847.—tf.

HORSE POWERS AND THRESHERS.

THE subscriber furnishes the above machines of all kinds at wholesale or retail.

It may be unnecessary again to call attention to the great superiority over all others for the price, of the "Warren Two and Four Horse Powers and Threshers," (which have been so very much improved the last year,) as the many who have purchased and are purchasing, testify.

The undersigned is also enabled again to add his testimony in favor of these machines, as being far before any others he has seen or heard of, after travelling extensively in the southern and western states, and Texas, during the last five months.

Orders for Corn Shellers, Corn Mills, Corn and Cob Crushers, Plows, and all kinds of Agricultural Machines and Implements, will be promptly attended to. JAMES PLANT,

June 1—1t. 5 Burling Slip, N. Y. City.

KINDERHOOK WOOL DEPOT.

THIS enterprise has been in successful operation for the past two years, and has fully met the expectations of the wool-growers, who have been its patrons and projectors. It will be continued the present year, conducted as heretofore. The subscriber will be prepared to receive wool as soon after shearing as may be convenient for the growers to deliver it. The fleeces will be thrown into sorts according to *quality* and *condition*. Those who desire it can have their clip kept separate, and sold when ordered. A discrimination will be made between wool in good or bad condition. Sales will be made for cash, and the owners can rely on prompt returns The charges for receiving, storing, sorting, and selling, will be one cent per lb. and insurance. Liberal advances in cash made on the usual terms. Sacks will be forwarded to those who wish, by their paying the transportation and 12½ cents each for their use, or if furnished by the owner of the wool, will be returned, or sold at their value, as he may direct.

Reference can be had to Dr J. P. Beekman, Kinderhook, D. S. Curtis, Canaan, C. W. Hull, New Lebanon, Col. Co., J. B. Nott, Esq, Albany, D. Rogers, Hoosick, Rens. Co, C. H. Richmond, Esq., Aurora, Cayuga Co., Col. J. Murdock, Wheatland, Monroe Co., N Y. H. BLANCHARD.

Kinderhook, June 1, 1847—3t.

CORN MILLS.

THE subscribers have just received at their Agricultural Warehouse, a newly invented cast-iron mill, for grinding corn and other grain, either by hand or horse-power. It will grind from 3 to 4 bushels per hour. Price, $30.

Also the hand Corn Mill, which grinds from 1 to 1½ bushels per hour. Price $6.50.

These mills are highly economical and convenient, and every farm and plantation ought to have them. They are simple in construction, not liable to get out of repair, and are easily operated. When one set of plates is worn out, they can be replaced at a trifling cost. A. B. ALLEN & Co.,

May 1—3t. 187 Water-st., New-York.

RENSSELAER INSTITUTE.

THE Summer Session for 1847 of the Rensselaer Institute, will be opened on Wednesday the 5th of May proximo. For informaion in regard to the course of study, terms of instruction, and other articulars, inquiries may be addressed to the Director of the nstitute, Prof. B FRANKLIN GREENE, Troy, N. Y., by whom amphlets will be furnished containing a detailed view of the course f study and all other necessary information.

Rensselaer Institute, Troy, N. Y., April 15, 1847—2t.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

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☞ Two editions of The Cultivator are issued—one without covers and unstitched, which, by the decision of the Postmaster General, is subject to *newspaper postage* only—the other, stitched in printed covers, the postage of which would be 3½ cents per number. The covered edition is never sent by mail, except particularly requested.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, JULY, 1847. No. 7.

ACTION AND INGREDIENTS OF MANURES.

LETTER TO PROF. WEBSTER.

Giessen, May 1, 1846.

MY DEAR SIR—The discovery of ammonia in soils, to which I alluded in my last, and the important results to which it must lead, will appear in clearer light after a brief consideration of the subject of manures.

The time is not long gone by, when plants were supposed to owe their growth to some mysterious creative power, the living principle possessed. This opinion, since the element of quantity has been carried from physics into the other departments of science, and especially into chemistry, has gradually lost its supporters. Occasionally, however, a man may be found, who demurs to a new doctrine in agricultural chemistry, with the expression—"You have not taken into proper consideration the action of the vital principle."

It is, nevertheless, well known, that without water, plants will not grow; and that they flourish better in some soils than in others; and that the addition of manures has been instrumental in greatly augmenting the produce of fields.

What the essential ingredients of manures are, and how they act, and what are the sources of the ingredients of plants, especially of carbon and nitrogen, have been objects of repeated investigation by some of the first scientific men of the age.

You will remember that Saussure recognized, some time since, alkalies and alkaline earths in the ashes of plants; but found them in such variable proportions, that he came to the conclusion that they were non-essential,—occurring in the plants merely because they were present in the soil in a soluble state.

You are aware that Boussingault has expressed the opinion, after a variety of experiments, that the value of a manure is in near relation to its per centage of ammonia.

Mulder, has, you know, written much in support of the view that ulmic and humic acids, ulmates and humates, etc., in one form and another, minister largely to vegetation. And in the last volume of Berzelius' Jahrs-Bericht, received a day or two since, I see the above-named distinguished chemist has been recently conducting a series of experiments, lending, in his view, support to his previously expressed opinions.

Liebig differs from them all. He found that though the relative amounts of magnesia and lime, potash and soda, occurring in the ashes of a Savoy pine, and of the same species grown elsewhere, might be greatly unlike,—the amount of oxygen in combination with the metals, calcium, magnesium, potassium, sodium and iron, of the ashes, was a *constant quantity*. This observation bears the stamp of its great author, and its importance can only be estimated in connection with a detailed exposition of the evolution of organic acids, alkaloids, and indifferent bodies in the vegetable organism. Of this you will not expect me here to write.

This great law he discovered and laid down: that for the full development of the organic tissues of each species, a certain per centage of inorganic bases is indispensable; and that of these, potash, to a certain amount, may replace soda, and magnesia lime; but the *amount of oxygen must be constant*.

In other words, the equivalents of base must be a constant quantity for each species.

When you take in hand a number of ash analyses of the same species of plant grown on different soils, and calculate therefrom the per centage of oxygen of the bases, you will find that the results differ but little from each other. For different species the per centages of oxygen vary, as do also the relative and absolute amounts of the several bases and acids.

Liebig, as you are already aware, takes the position that the sources of carbon and nitrogen are carbonic acid and ammonia of the air, and *not* soluble organic bodies met with in some soils. He asks if it be not so, where the thousands of tons of wood, grown for centuries in succession, on a soil containing but traces of organic matter, have derived their carbon? And again:

What replaces the nitrogen shipped from Holland in hundreds of thousands of pounds of cheese yearly, if the ammonia does not come from something besides decaying organic matter?

A meadow, yielding year after year, without manure, an uniform moderate crop, by addition of gypsum, had its produce increased a third. The addition of ashes increased its production another third; and the distribution of bone ashes another third.

So here, by the addition of mineral matters, its capacity of production had been doubled. No new source of carbon had been provided—no new source of ammonia—and yet the hay gathered after the additions of mineral matter, contained twice as much carbon, and at least twice as much nitrogen as before.

Where did these ingredients come from?

Boussingault's ingenious experiments with regard to the sources of carbon, had yielded a partial answer. The carbon came from the carbonic acid of the air. The ammonia, as you will presently perceive, could have had no other origin.

Farraday, I need not mention to you, found ammonia in almost all bodies. Even metals, dropped in fused potash, yielded ammonia. Sand, heated to redness, and poured, upon cooling, along the back of the hand, immediately after, yielded ammonia.

Mulder has thrown out the idea, that organic bodies in the progress of decomposition, produce ammonia, not alone by parting with their nitrogen in this form, but by causing, through the molecular action attendant upon the decomposition, the union of the nitrogen of the air with the hydrogen of the organic body, or of water decomposed at the same time. Berzelius, even, says that if iron filings be placed in the bottom of a jar, they will oxydate at the expense of oxygen of water, producing, by the union of the hydrogen thus set free with the nitrogen of the air, ammonia.

Professor Will, of the Giessen Laboratory, has shown by the most conclusive experiments, in opposition to the latter most distinguished chemist, and to M. Rieset, who entertained a similar view, that nitrogen unites with hydrogen under no such circumstances; and Mulder's view fails in quantitative experiment of its support. Indeed, the experiments of the Dutch chemist, detailed in the last Jahrs-Bericht, having a *qualitative* purpose merely, have not won the conviction of Berzelius.

Ammonia, Liebig maintains, is a body not indebted to organism for its being; that it is to be classed with iron and potash, and soda and oxygen, whose quantity within the organism of plants and animals, and without, is, in general terms, constant. He holds, that when the required physical properties have been given to a soil, and the necessary inorganic ingredients, in suitable solubility, the ammonia and carbonic acid, with healthful falls of rain, will provide themselves.

Muck serves so eminently well in giving the requisite porosity to a soil, that a wide-spread conviction prevails in America, that somehow, it becomes dissolved, and passes, according to Mulder's view, directly into the vegetable economy, without first becoming carbonic acid, ammonia, and water.

I found ammonia in the glacier-ice that comes down from the summit of Mt. Blanc.

The quantity, though small, was determinable by the balance, and the fact is established, that even at these elevations, this ingredient does not fail.

I herewith send you the determinations of my friend Dr. Krocker, now Professor of Chemistry and Physics in the Agricultural Institute of Breslau, in Silesia.

TABLE

Of the Ammonia Contained in Soils, by DR. KROCKER.

SOILS EXAMINED.	Ammonia in 100 parts of air-dried soil.	Specific Gravity.	Pounds of Ammonia in a soil of one Hectare in area, & 0.25 metre deep
Clay soil before manuring,	0.170	2.39	20314
Clay soil	0.163	2.42	19723
Surface soil. Hohenheim,	0.156	2.40	18720
Subsoil of the same,	0.104	2.41	12532
Clay soil before manuring,	0.149	2.41	17953
Clay soil, "	0.147	2.41	17713
Soil for barley,	0 143	2.44	17446
Clay soil before manuring,	0.139	2.41	16749
Loam,	0.135	2.45	16537
Loam.	0.133	2.45	16292
Illinois prairie soil,	0.116	2.18	12644
Cultivated sandy soil,	0.096	2.50	12000
Excavated loam earth,	0.088	2.50	11009
Cultivated sandy soil,	0.056	2.57	7028
Nearly pure sand,	0.031	2.61	4045
Varieties of Marl,	0 0988 0.0955 0.0768 0.0736 0.0579 0 0077 0.0017	.... 2.42	11952 11552 9288 8904 7004 931 568

A metre is 39.37 inches; so 0.25 metre are a little more than ten inches, or five-sixths of a foot.

A hectare contains two and a half English acres. I have converted the last column into English values, and adjoin them.

NAME OF SOILS EXAMINED.	Ammonia in a stratum one acre in area and one foot in depth, in pounds avoirdupois.
Clay soil, before manuring,	9751
Clay soil,	9463
Surface soil from Hohenheim,	8985
Subsoil from the same field,	6015
Clay soil before manuring,	8617
Clay soil,	8502
Soil for Barley,	8373
Clay soil before manuring,	8039
Loam,	7938
Loam,	7820
Illinois prairie soil,	6069
Cultivated sandy soil,	5760
Excavated loam earth,	5280
Cultivated sandy soil,	3373
Varieties of Marl,	5637 5545 4458 4274 3362 447 272

The "excavated earth" was taken from a depth below all traces of organic matter. The Illinois prairie soil was brought by a returning German, in paper, from a field that had been cultivated without manuring already ten years I think.

Now, what farmer ever carted from his manure yards 8000 pounds of ammonia to an acre of land? One may almost say, what farmer ever carted the tenth, or even the twentieth part of this amount.

It is obvious that the ammonia spread on fields in the ordinary distribution of barn-yard products, is of no moment. The quantity, with usual falls of rain, greatly exceeds, in the course of a season any conceivable supply by human instrumentality. These results put the question of the sources of ammonia or of nitrogen out of all doubt.

But if, with the manure heap and the liquid accumulations of the barn-yard, transported to the fields, the ammonia be not the chief ingredient, or an important one, to what are we to attribute the unquestioned value of stable products and night soil? Prof. Liebig has shown, that if plants be manured with the ashes of plants of the same species, as the grasses of our western country are when burned over in the fall, they are supplied with their natural inorganic food. He has shown the truth of the principle in a great variety of ways. Among others, he has been feeding some grape vines with the mineral matters of their ashes, in the proportions in which analyses have shown them to be present; and their development has been luxuriant in the most remarkable degree, though the soil upon which they have been grown is little better than sand. He made a variety of experiments with grains, roots, flowers, &c., which I had last year the pleasure of following, and this spring he has commenced them upon a more extended scale.

Let us consider what these ashes are, and what manure is.

Herbivorous animals derive their nourishment from the vegetable kingdom exclusively, their food being grass, grains, roots, &c. These, with their organic and inorganic matters are eaten. A portion of them is assimilated, becoming bone, muscle, tendon, fat, etc. Another portion is voided in the form of excrementitious matter. In process of time, the bones and tissues follow the same course. What to-day forms the eye, with its sulphur, and its phosphorus, and carbon, &c., will have accomplished its office, and left the organism to mingle with the excrements, or escape as carbonic acid and water from the lungs. At length, all the inorganic matters will reappear in the voided products.

Carnivorous animals satiate their hunger from the already developed organism of the herbivora. Their food, of course, contains merely what the plants had furnished. In their excrements reappear the soluble and insoluble inorganic substances, mingled more or less, as is the case also with the herbivora, with indigestible matter, such as hair or woody fibre.

The animal organism has performed the office of a mill. Grain was supplied. Instead of appearing as flour and bran, and the intermediate meal, it appears after intervals of greater or less length, in soluble inorganic salts in the liquid excrements, in insoluble inorganic salts in the solid excrements, and in carbonic acid and water.

Now after burning a plant, what remains? It contained when growing, carbon, nitrogen, hydrogen, and oxygen, as organic bodies, and water.

It contained also, in variable proportions, common salt, potash, soda, magnesia, lime, iron, phosphorus, sulphur, and silica.

The first four were expelled in the combustion. The remaining ingredients, for the most part, remained unchanged.*

Had the plant gone into the body of an animal, and in the course of its evolutions through the organism lost its carbon, hydrogen, nitrogen, and oxygen, the remaining ingredients would have been the same as before.

In the one case, the plant would have been burned in the organism; in the other in a crucible. The ashes and the excrements are substantially the same.

The principle of the rational improvement of soils is, then.

1st. *A proper physical constitution* for the retention of moisture, escape of surplus rains, expansion of roots, etc. Unless the moisture be detained, the ammonia that fell with it will escape; and as the inorganic matters contained in the soil must be sought, a free and wide expansion of the roots is indispensable to vigorous growth. This texture will be derived from the plow, harrow, spade, and hoe, and admixtures of sand in some soils, clay in others, loam in others, and organic refuse in most.

2d. *A supply of the inorganic ingredients*, which the ashes of the plant to be cultivated contains, in such a state that they may be readily taken into the vegetable system, and yet not so soluble as to be washed away by rains.

I will venture to add a single additional remark to this already long letter.

Seven inorganic bodies included in the ash products above mentioned, are absolutely indispensable to the growth of plants. A soil wanting these cannot yield seed capable of reproducing its kind.

Here, then, all the mysteries of gypsum being serviceable on some soils, and for a number of years, and then being no longer of use,—of its benefiting some soils greatly, and others not at all,—the great value of quick-lime or of calcareous marl on some lands, and their uselessness on others,—the profit of employing bone dust (phosphate of magnesia and lime,) generally,—the worth in some instances of salt,—of straw, plowed in,—of poudrette,—of guano,—horn-scrapings,—soda,—saltpetre, etc.,—become solved.

Some soils have already sufficient sulphuric acid and lime. Gypsum would not benefit them. Others have enough of all the remaining ingredients, but lack sulphuric acid. Gypsum supplies the deficiency.

Two or three years' culture, or ten perhaps, exhaust another ingredient. Bone-dust possibly supplies the want.

In time, however, still another recurs. Potash or soluble silica. Gypsum, in never so large a quantity, contains no trace of phosphoric acid, or potash, or silica.

Soda may be wanting. Salt will supply it.

The texture—the porosity necessary to retain moisture, carbonic acid, and ammonia, may require improvement. Straw, or leaves plowed in, accomplish the end.

Stable manure contains the ashes of the oat, and corn, and hay, with their carbonates, phosphates, sulphates, and silicates, with such an abundance of organic refuse, that it meets the demands of most soils.

A drouth prevents mineral matters from being taken into plants, and without rains the ammonia is not brought down from the air.

Night soil and guano are the ashes of animal and vegetable organism burned in animal bodies. They are the ashes of plants—the essential food of plants. Hence their value as manures.

Explanations of many things, hitherto obscure, present themselves to any one after contemplating this view of manures. I will not enter upon the subject of the rotation of crops, the object of which is, chiefly, the renewal of soluble mineral matters by the action of the atmosphere, changes of temperature, carbonated water, etc.

I have no doubt that ere long the application of these doctrines will reveal in the many, now considered, quite exhausted farms of New England, untold sources of wealth. You would think me sanguine beyond reason if I were to express my honest conviction of the still virgin capabilities of the soil of our pilgrim fathers, and I will not venture it. We shall see.

I am, &c., EBEN N. HORSFORD.

FINE FARMING AND GREAT CROPS.—James Gowen, of Mt. Airy, near Philadelphia, raised, in 1845, a ten acre field of corn, which averaged 95 bushels of shelled corn per acre. It had been in grass, without manure, five years; it was plowed and the field manured with a ton of guano, costing $40. The rows were 3½ feet apart, and the plants 12 inches. (This distance would be too great for small northern corn.) Judicious harrowing, in preparation, cleared the ground thoroughly of grass and weeds, and it was kept perfectly clean afterwards at little cost. There were 7 acres of winter wheat, and one of spring wheat, the whole computed to average over forty bushels per acre. The spring wheat was after an acre of carrots, of 900 bushels, and was followed by an acre of turneps of 1000 bushels; the whole worth over $500,—from 1 acre in two years. The carrot crop the same year was 1000 bushels per acre, sugar parsnep 800 bushels, ruta baga over 600, potatoes, 3 acres, over 200 each. These were only part of the crops. Besides, there were more than 100 tons of excellent hay, though the season was unfavorable. All on an upland farm of about 100 acres, which maintained during the summer over 60 head of cattle. So much for manure, subsoiling, fine culture, draining, rotation, &c.

WHEAT AND CLOVER AFTER CORN.—The Michigan Farmer mentions a case where a sixty acre corn field was sown with wheat, while the corn was yet standing, and which was *cultivated* in. Late in the fall the corn was taken off, the wheat at the time covering the corn handsomely, and it subsequently afforded a fine crop. A successful case is also mentioned of sowing clover-seed among corn. It was sown immediately before going through the corn the last time, and followed with the cultivator. When the corn was harvested the clover was several inches high.

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* This is not strictly true. The phoshorous and sulphur would become by union with oxygen, phosphoric and sulphuric acids. The same qualification may be extended to the paragraph which follows.

BREEDING HORSES—No. II.

Since my former article on this subject was written, I have met with a communication in the *London Veterinarian* for February last, written by William Goodwin, Veterinary Surgeon to the Queen. Mr. G. begins by saying that "it is an admitted fact by all those conversant with the horse market in England, that good horses were never known to be so scarce as they now are." The kinds of horses of which there is the greatest scarcity, are hunters and riding horses, "it being," as he says, "but too true that the superior riding horse, or valuable hunter, has become almost a *rara-avis*, as compared with former days." His idea appears to be, that due regard has not been paid, in breeding, to substance and constitution. The following paragraph shows that the thorough-bred racer is not the kind of horse he is desirous of procuring for the purposes mentioned:

"Some years since, when the Earl of Albemarle was Master of the Horse, his Lordship sent me to Cheltenham, to look at a carriage horse that had been reported to him as likely to make an acquisition to the royal stables. On setting out, I had but little idea that I should find the required description of animal in that part of the country; but directly I saw the horse, I did not hesitate for a moment to make purchase of him, the price being but 110 guineas, [about $550.] He belonged to Mr. James, the livery stable keeper there, who informed me that an own brother to the horse, equally as fine an animal, had been sold the previous year to Mr. Elmore, who had sold him to the Master of the Horse to Queen Adelaide, for the royal stables. Two finer horses were never seen; and they were both about sixteen hands three inches high. Now, these horses were got by a thorough-bred horse out of a Welch pony mare, not more than fourteen hands high. Had these circumstances occurred in a stud, the results obtained would have probably led to the repetition of the cross often enough to have elicited some highly important facts."

The first American authority to which I would refer, to show the degeneracy of the blood horse, is the late Cadwallader R. Colden, a gentleman eminently distinguished in his day for his extensive knowledge of horses, and a devoted amateur of the turf. In the first volume of the *New-York Sporting Magazine*, (1833,) is a series of articles from his pen, under the signature of "An Old Turfman," entitled "*Blood Horses of the Olden Time.*" He observes—

"That the English [blood] horses of the present day are very different in form, appearance, size, and in many instances those marks indicative of high breeding, from what they were seventy or eighty years ago, is certain. * * * That those bred of late years in America are running into the same extremes of height and length, as those now bred in England, there cannot be a question; and although it is possible, (which, by the by, admits of a doubt,) that they may have acquired some small addition of speed, this is overbalanced by their general want of endurance."

After having fully discussed and considered this point, he adds in conclusion—"that there has been a falling off in the American-bred horses, in those essential requisites, *form*, *substance*, and *durability*, I am warranted from nearly forty years' observation in asserting."

Mr. Colden considered the chief error in breeding, to be the same here that has prevailed in England—that is a passion for *tall* horses, with the ability to make a long stride. He says it is this fashion which has induced breeders to "send their mares to some tall, lath-like made animal, sixteen hands, or sixteen hands and a half high, because he has what they term *size;* that is, nine times out of ten, very long and ill-shapen legs; nothing in his style or form indicative of stamina, strength, or continuance."

Such, he remarks, is the kind of animal which many breeders have selected, "instead of one of moderate height, and of great muscular power and substance, which they will call a *little horse*."

Gen. Thos. Emory, of Md., the breeder of the noted running mare Lady Clifden, in a letter to the *American Turf Register*, (vol. IX., March, 1838,) speaks of the horses which he had seen during a visit he had then lately made to England. After mentioning *Camel*, *The Colonel*, and *Caccia Piatti*, he says—"I saw no other horses in England that I would breed from gratis, except the *Black Arabian* in the king's stud, which they have allowed to be sold to the continent without, as I understood, having bred but few mares to him. This horse bears all the marks of the pure Arabian,—a high racing form, silky hair, and legs that look as clean and flinty as those of the deer, with the finest game head, terminated by a muzzle containing nostrils which, when distended, you might thrust your fist in. The passion in England for breeding slapping colts to run in their two or three year old stakes, completely puts this noble horse under the ban. They will probably have occasion to regret his loss."

An idea seems to prevail that a horse which exhibits the most speed upon the turf, must of course be best calculated for use as a roadster or carriage horse. Without intending to discuss the point in detail, it may be well to inquire whether the form and proportions which confer the greatest power and speed in the gallop, would also enable the animal to move to the best advantage in the gait required for the carriage? To my mind it appears evident that the different action in running and trotting, requires a corresponding difference of mechanism, to confer the greatest facility of movement in both cases.

To illustrate this, take an example. Perhaps a better model of an animal for racing or galloping, could not be selected, than the hare. Its mode of progression, when pursued, is by a succession of rapid leaps, and the perfection of its organization for such movements, is evinced by its astonishing performances—a space of from ten to twelve feet being passed over at a single bound.* But what sort of a figure would a hare cut at a *trot?* Observe the motion of horses whose shape approaches nearest the hare: a long, low, slouching gait, moving, as it were, "a side at a time," distinguishes them. Take, for instance, the celebrated English race horse Eclipse.

Prof. St. Bell, in his "*Essay on the Proportions of Eclipse*," states that he was one inch higher from the top of the rump to the ground, than from the withers to the ground; and he observes that this form, together with the disproportionate size of the hind quarters, necessarily occasioned a degree of wavering in the croup, perceptible and somewhat unpleasant in his gallop."

It is a well-known fact that many horses which run well, are, when put to a trot, liable to stumble—a fact so generally acknowledged as to give rise to the trite expression,—"a race horse is a stumbler."

Again, does it not frequently occur, that very distinguished racing stallions, beget the most worthless description of stock for use on the road, and indeed for any useful purposes? On the contrary, it is frequently the case that horses which acquire no particular distinction on the turf, prove to be the most valuable stock getters. This can be substantiated.

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* The animal here alluded to is the varying hare, *Lepus variabilis*, of naturalists.

Mr. Burke, in the essay on breeding horses from which I have before quoted, observes—"There are many of our racing stallions that have scarcely ever begotten a foal that turned out a good racer; but that when put to mares not quite thorough-bred, have produced hunters of first-rate capabilities."

An idea prevails, also, to some extent, that the Arab horses cannot improve the English stock, because their progeny do not always prove to be racers. In reference to this, a writer in the *Farmers' Magazine*, (1845,) cites several examples of Arab horses having produced valuable stock. The first is the *Cole Arabian*, so called. "He had," says the writer, "some of the best Irish mares put to him, but none of their progeny could run with the common average of English and Irish race horses, except when receiving weight; and accordingly he was kept at Dublin for half stock, and his stock proved most excellent, sinewy, and spirited, with extraordinary powers as hunters or roadsters, some of them distinguishing themselves as steeple chasers." He gives another example: "We have another instance in the fine grey Arabian imported by Gen. Brownrigg: the best Irish and English blood were put to him for trial; but although he got some splendid hunters, as to racing, it is altogether out of the question."

But although the horses of English blood have of late years generally beaten those of eastern origin on the course, it is not certain that a similar result would ensue in a longer contest where strength and endurance would be more required. An account is given of a race which took place at St. Petersburgh, in Russia, on the 4th of August, 1825, in which an English horse ran 49¾ miles in two hours and forty minutes. This was certainly an extraordinary performance, though it appears to have been exceeded by a Russian or Circassian horse, in another race which took place on the banks of the Don, on the 28th of April, 1826. The distance run was 44¾ miles, in a continuous line. There were twenty-five horses engaged in the race. The winner, a horse called Jason, performed the distance in two hours and five minutes. Ten horses, besides the winner, arrived at the goal in good condition, but of the remaining fourteen, most "died during the race or soon afterwards." A comparison of the performances of these two horses, shows that the English horse ran 18 miles 210 rods per hour, while the Circassian ran 21 miles 153⅓ rods in the same time; and that the English horse would have been twenty-one minutes more than the Circassian in performing the 44¾ miles. Equus.

DEBATE ON THE PROFITS OF FARMING.

Amateurs may engage in agriculture for the *poetry* of it; but most of those who follow the business for a livelihood, are under the necessity of making its *profits* the primary object. There is an impression, more or less prevalent, that farming is in general less profitable than most other occupations. We will not undertake to say how far this impression is founded in fact; but it will be obvious to those who examine the subject, that from the loose manner in which accounts of farming operations are generally kept, the actual profit or loss can hardly ever be determined with anything like accuracy.

Believing that any remarks which tend to show how the great object of farming can be best attained, will be read with interest and advantage, we submit the following synopsis of a discussion on the "Profits of Farming," which took place at the Agricultural Meetings held at the State House in Boston during the last winter. The reports of the discussion, as published in several of the Boston papers, were given in considerable detail; but we have only attempted to preserve the substance.—Eds.

Mr. Sheldon, of Wilmington, said that though it was sometimes denied that there was any profit in farming, he thought there was no business which gave a better profit. Nine farmers out of ten contrived, even without any system, to *get along*; and there was no other business that would give a man a living with so little system as most farmers practised. It was true that men of capital often failed; but it was because they farmed to suit their *taste and fancy*, and not for dollars and cents.

Mr. D. W. Lincoln, of Worcester, did not agree with Mr. Sheldon as to the profits of farming. He doubted if farming would afford anything more than a comfortable living. He believed that a day laborer, who should let himself to a farmer, would make more money than the farmer who hired him; and would, in ten years' time, be almost able to buy out the farmer for whom he had been laboring, with the very wages paid to him. It was the common error of agricultural writers to exaggerate. He often heard of raising one hundred bushels of corn on an acre. He would not say that this could not be done; but he would gladly go one hundred miles to see it.

Mr. Peters, of Westboro', thought that there must be profit in farming. He had succeeded in bringing up a family of eight children on the profits of half of his father's farm. He believed that there was a fair profit to be made by raising corn at 75 cents a bushel, even if you paid $12 or $15 a month for labor. He had got 80 bushels from one acre, and could cultivate it for about $20 an acre.

Hon. Mr. Denny could not agree to the proposition that all a farmer could get was a mere living. He thought if we were to take two thousand young men; let one half of them become farmers, and let the other half devote themselves to merchandise, in twenty years it would be found that the farmers had made the most money. He insisted that if equal capital, equal skill, and equal industry, were employed in farming as in trade, farming would give the most profit. But farmers do not work so hard as merchants and manufacturers. More mind is requisite to manage a farm well than to perform the usual kinds of mechanical labor.

Lieut. Gov. Reed deprecated the practice of young men from the country crowding into the city. It was the disposition of the times—and a very bad disposition it was—not only to get rich, but to *make haste* to be rich. Farming was not the business to get rich by; but if happiness was an object, there was no business so well adapted to promote this as farming. Taste could not be much gratified by common farmers. They must be contented with a good living profit.

Major B. Wheeler, of Framingham, had long thought farming the pleasantest, and on the whole, the most profitable business that is followed. He had been bred a mechanic; he then engaged in trade; was afterwards concerned in manufacturing; and now he attends to farming. Many years ago he purchased a farm in Framingham for about $10,000. He had leased it for three years at the halves. The tenant returned $800 per annum for his share, and the farm was well treated. He spoke of the profits which had been derived from improving bog lands, and said that Mr. Wetherbee, of Marlborough, had 15 acres of this kind of land which produced last year 60 tons of hay—or four tons to the acre. He spoke of education, as connected with the subject of profitable farming. He thought farmers' boys had not generally a proper kind of education. They work, but they are led along without being required to think. If their minds could be engaged in the business they would like it.

Hon. Mr. Clark, of Walpole, said that 25 per cent. clear profit had been made by bringing cheap lands into good grass. He had land that cost him ten dollars per acre. He had cleared twenty-five per cent. on this, though he hired all the labor. From 65 square rods of this bog land, which he had brought into English grass, he cut over 3,900 lbs. of hay in 1845. And this hay was then worth forty-four dollars and odd cents, at the market price in Walpole. The average price of hay in his region was $18 per ton. He used ashes as manure on his grass land, and thought those unleached were worth 12½ cents per bushel. He applied them as soon as the snow is off in spring. They kill out couch or witch grass [?] and induce the growth of clover and good grasses. In Norfolk county, land set in fruit trees would pay a profit of twenty-five per cent. Some of his neighbors had got into the peach business and made 100 per cent. One acre set in peach trees yielded more than $200 last year.

Mr. Brooks, of Princeton, said in answer to an inquiry, that he had reclaimed some of his rocky pasture land at a cost of $100 per acre, and was paid for in a few years in the crop of hay.

Hon. Mr. Calhoun thought if we were to compare the whole profits of farming with the profits derived from other pursuits, it would be found that farmers on the whole succeed best. Let 100 men go into a city and trade; let 100 go to farming, and at the end of 20 years the 100 farmers will be worth the most money. It is ascertained that of 100 merchants who had done business on Long Wharf, more than ninety became insolvent. In examining the condition of 1000 men who had accounts at a bank, it appeared that only six became independent. These are facts grounded on thorough examination. To take a general view of the subject, out of 100 estates at the probate court, in Boston, ninety were insolvent. These are facts to be put down by the side of farming. He had found that systematic, prudent, and diligent farmers always succeed. Mr. Brooks had said that fifteen per cent might be realized from farming capital. He (Mr. C.) believed it might in many cases be done by farming *intelligently*. He had wondered that farmers generally could get along so well as they actually do in their careless mode of farming. For himself, he had regained his own health by farming. The fresh open air had restored him. One more consideration should have much weight. It had been truly stated by his venerable friend from Framingham, Major Wheeler, that this business naturally leads the mind to contemplation, and to gratitude to the Ruler of the Universe, to whom farmers should look for a blessing on their labors. No occupation so directly leads the mind to reflection on the works of creation. He thought we needed a better system of education for farmers. They should know something of the sciences on which agriculture rests; and science should be brought down so as to be clearly understood, in order to be useful. Minds now run to waste; we quit school and are then permitted to think of nothing but hard work.

Hon. Mr. Denny said that he had examined into the statement of 97 failing out of 100 engaged in trade, and he believed it was correct. He found that out of 1112 cases of insolvency in this state, during 11 months, only 14 were called farmers; and he had examined as to a part of these, and found that they did not attend strictly to farming. One was a lazy man, another a stage owner, and a third *no man at all.* Yet young men rush to the city to acquire wealth!

Capt. Benj. Porter, of Danvers, said that out of one hundred farmers in the circle of his acquaintance in Essex county, there had not been a failure for 40 years. He had farmed and traded, and farmed again. He had been in debt and lain awake many a night to contrive how to take up his notes given in trade. He lost his health, but had recovered it on his farm. He bought a farm that had been neglected and worn out, for $5,500. It had numerous fruit trees, but they bore no fruit. He commenced by plowing and cross-plowing among the trees—bought yearly $100 worth of manure, and the third year had $793 worth of apples. He had also made money by swine. He had a sow that brought nine pigs. When these were sold, [age not stated,] they brought him $253. He cited the instance of the Howe farm, on the Beverly town line, which during the last 40 years, had been leased to six different men in turn, and all of them had made money on it by having half the proceeds. They went to the farm poor, but several of them made money enough by the profits of farming to buy themselves good farms.

Hon. Mr. Russell, of Princeton, said that he let a farm worth $3000 to a young man, and he paid the rent—$150, or five per cent on the investment—supported his family, and laid up $100 a year. He had seven daughters, and he brought them all up well educated. He left the farm in a good state. The Gill farm in Princeton, 600 acres was rented for a number of years. The lessee retired with a handsome property.

Mr. Clary, of Conway, spoke of the profitable corn crops which had been raised by some of the members of an agricultural association, or farmer's club, formed in the town to which he belonged. The society chose a committee who examined the lots offered, (ten in number,) measuring two rods of each, and from this made their estimate of yield per acre. The yield of the ten lots was as follows: 134, 132, 111, 110, 95, 92, 90, 86, 76 bushels.

The corn was measured in October, and would probably shrink considerably. The land on which it grew was not naturally rich. It was dressed with 30 or 40 loads of sheep manure to the acre—a part being spread and plowed in, and the remainder put in the hill. The corn was planted in hills three to three and a half feet apart, four stalks to the hill.

Major B. Wheeler, of Framingham, said a townsman of his, Mr. Edmunds, had very recently stated to him, that seven years ago, he bought a farm of 74 acres for $2,250. He sold off ten acres and a lot of standing wood for $1,000, leaving his purchase at $1,250. From these 64 acres he sold produce last year to the amount of $700, and he hired but eight days' labor. His own labor, therefore, amounted to more than $600, after paying labor hired and the interest on his capital.

Mr. Parker, of Sudbury, formerly president of the Middlesex Agricultural Society, said, when he was a boy he thought farming was not good enough for him, and he engaged in trade. He lost his health in this business, and he bought a poor farm because it was in his way. He gave $2,000 for it. The former owner had cut but two tons of hay on it, and this made the cattle shed tears to eat it. Now he cuts forty tons, besides the grain and other produce. It may be made to cut 100 tons. The land cost 17 dollars per acre; a number of the acres would now bring $100 each. There were two acres of bog on the farm, which he offered to sell for $25. Finding no purchaser, he employed two Irishmen to drain it, which they did thoroughly in a day. He found the bog to be composed of peat, and since that time, he had cut and used in his paper factory 200 cords of this peat, by which he made a saving of five hundred dollars in fuel. It cost only a dollar a cord to cut and dry the peat. He thought farmers did not work as hard as mechanics and manufacturers. Some will sit still all winter and leave their wood uncut for summer, and are then obliged to quit haying to *make the pot boil*. Money could be made by farming, if farms were attended to.

Mr. **Brooks**, of Princeton, said his experience in farming was similar to that of Mr. Parker. He went on his farm about twenty years ago, at which time he could only winter six head of cattle. He now winters thirty head of cattle, two horses, and two colts, from the products of the same land.

Mr. **Wheeler** offered a resolution in regard to introducing instruction in the science of agriculture into colleges and seminaries of learning.

Hon. **B. V. French**, of Braintree, agreed that we wanted more knowledge on agriculture, but he doubted whether we could obtain it from *professors*. Instructors must be practical men. A pattern or experimental farm, where boys could get an education, and also a practical knowledge of farming, would be useful. By properly dividing their time, they might enjoy more health and gain more knowledge than they now do, when books only are the means of information. Students who are conversant with nothing but books, become feeble and emaciated. The lads in the city who have nothing to do but to acquire lessons from books, are outdone by young men who are bred in the country, and are used to a more active life. No profession required so sound a head as farming. As to profits, it was difficult to form an accurate estimate. So far as the land was made better, it was rather a matter of opinion. People estimate improvements differently. Many of the calculations of annual profits, too, are vague and unsatisfactory. Some of his own neighbors, who had done no other business through life, and had but very little to begin with, had accumulated pretty good fortunes; that is, say $15,000 each. They are now quite advanced in years, have been moderate workers, and have lived prudently.

Mr. **Jenks**, of Boston, thought the importance of a proper education, as bearing on the success of farming, could not be too highly estimated. The difference between those mechanics who come here from Europe with a proper education, and others, is great. He thought the great improvement which has been made in plows, was the result of scientific investigation. He had heard of a man who made a profit by farming with the aid of books alone, without any practical education. He was guided by science only.

THE FARMER'S NOTE BOOK.

Hall's Brick Machine.—I observe in the March number of the Cultivator, page 97, under the head of Hall's Brick Machine, you quote the following:—"With the power of one horse and two men, [with two boys carrying off,] from 6,000 to 10,000 brick can be produced in a day."

No brickmaker north of New Jersey would want a machine, or ever trouble himself about one that would produce but 6,000 brick per day; and as statements relating to new inventions are supposed to rate them generally at their greatest capability, the quotation is calculated (especially at the north,) *to prevent the sale of my machines*, except in such places as they are known.

There was not far from two hundred millions of brick made last summer in the United States with my machines. Near one hundred millions of these were made on the Hudson river; twenty-five millions were made at the single town of Coxsackie. My machines are now in use in most of the states, and I know of no place where less than 8,000 bricks are produced regularly every day, but at the south with slave labor, the brick being very large, and five brick made at each impression, instead of six of the smaller brick at the north, it is necessary to add a third off bearer. I know of no place north of New Jersey where less than 10,000 brick are produced regularly per day with one machine, and in some cases the regular day's work is 13,000. The greatest number made daily last season with one machine, was 15,000, and I understand the same man who moulded them has entered into contract to mould the same number daily this summer. I have frequently known of 10,000 being made (with four hands and one horse,) in six hours, and 3,000 in one hour. But what brickmakers want to know, or that which it is most satisfactory to know, is the number that can be made in a season, as men ordinarily work. The number moulded by one man during the season, (five months,) on the Hudson river, was from twelve to fourteen hundred thousand. I will refer you to the statements made by practical brickmakers and published in the Farmer and Mechanic, Jan. 1st. These statements were made, (such as were made to me) mostly in letters of business, unasked for, and they may be relied upon as correct. You will much oblige me to notice the foregoing facts in your next number of the Cultivator. **Alfred Hall.** *Perth Amboy, N. J., May* 16, 1847.

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Relative Profits of Wheat and Indian Corn.—It is the opinion of the best informed farmers, that the average yield of wheat in the counties of Seneca and Cayuga, for several years past, has not exceeded thirteen to fifteen bushels per acre. It will be less this year, from present appearances. The whole expense of raising wheat, may be put at $13 per acre. Wheat at $1 per bushel, gives but a poor return to the farmer for his labor and investment.

There has been a prevailing opinion throughout this section of country, that the raising of Indian corn, was more expensive, and yielding a less remuneration, than wheat. But I am satisfied from the little experience I have had, that the cultivation of corn will give a better return for the labor and expense than wheat. For, on making a calculation attending the expenses of raising corn, I have found it to be about $10 per acre. If only 30 bushels are raised to the acre, which would be considered generally an indifferent yield, and the market price, say 50 cents per bushel, which is and has been the average price here, and wheat at $1 per bushel, it will be seen at once which yields the most profit to the farmer.

I am aware that the falling off in the yield of wheat has been uncommonly great from what it was 25 to 30 years since, owing in a great degree to the manne adopted by our farmers generally, in not cultivating the lands as they ought; having been under the fatal impression that the soil could not be exhausted, from its former virgin fertility. Shallow plowing, and exhausting crops, without giving back a return to the lands, —in other words, taking all and returning nothing that ought to have been, has been too much the prevailing error. There are some exceptions to this rule, and where there are such the return has been in proportion. J. O. D.

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Liebig's System of Manuring.—In the Cultivator for December, 1845, is an account of a *patent manure* which had been invented by Prof. Liebig. This composition was very highly recommended by Prof. L., and several associations were formed for the purpose of manufacturing it for sale. It was said that a company in England proposed to engage largely in the business. From the confident manner in which the distinguished chemist recommended this manure, great expectations were created in regard to it. The article in the Cultivator, before referred to, was originally, it appears, sent as a communication to the *Agricultural Magazine*, London. In this communication, Prof. L. intimates that by the use of this composition, "*agriculture will be placed on as certain principles as well arranged manufactories.*" He supposes, also, that "manufactories of manure will be established in which the farmer can obtain the most efficacious manure for all varieties of soils and plants," and that by the proper manufacture and use of the compound, "a new era will arrive in practical farming,"—that "instead of the uncertainty of mere empiricism, the operations of agriculture will be carried on with certainty, and instead of waiting the results of our labors with anxiety and doubt, our minds will be filled with patience and confidence."

I have been able, however, to obtain but little information in egard to the actual application and operation of this manure, either in England or elsewhere, though I have all along been anxious to learn something of its results. But in the April number of the *Farmers' Magazine*, I met with a letter in reference to this subject, from Dr. W. Weissenborn, of Weimar, dated March 1, 1847.

The letter of Dr. W. comprises a pretty free discussion of Liebig's theories in relation to agriculture, some of which he does not hesitate to say "we know by experience to be false." Among those theories he mentions particularly that which denies the necessity of adding carbon to the soil, than which, he thinks "nothing can be more absurd." Liebig, as is well known, holds that plants may derive their supplies of carbon wholly from the atmosphere—the atmosphere containing, to use his language, "an inexhaustible supplo of that sort of plant-food." But Dr. W. observes, that "plants are fixed to the soil, and deprived of locomotion. Could they soar on high, like birds, one might perhaps in fairness, bid them go in search of carbon through the atmosphere."

But I do not propose to enlarge at length on that part of Dr. W.'s letter which refers to theories, but would merely offer an abstract of the results of some experiments, which he states were made with a view of testing the value of Liebig's patent manure.

Experiment 1.—Soil a deep rich loam, containing a good proportion of lime, and having a warm south-eastern exposure. The crop grown on it in 1844, was beets, that of 1845 summer-colza, (a plant of the cabbage tribe, similar to rape.) On the 26th of April, 1846, one-half of the lot, (A,) measuring one-twelfth of a Prussian acre, was top-dressed with 20 lbs. of Liebig's patent manure, for grain crops, and then sown with 5½ lbs. of barley. The other half, (B,) was not manured at all, but sown with the same quantity of the same kind of barley. The weather was favorable, and the barley grew well; but not the least difference could be discovered between the two lots. The crop was cut on the 8th and housed on the 11th August.

The manured portion, (A,) yielded 23 sheaves, weighing 222⅓ lbs., and containing 92 lbs. of grain, 103¾ lbs. straw, and 26 7-12 lbs. of chaff, and other refuse matter.

From B, there were harvested 22 sheaves, weighing 234⅔ lbs., containing 95⅓ lbs. of grain, 108 8-15 lbs. of straw, and 30 12-15 lbs. of chaff and other refuse matter. Liebig's manure had not, therefore benefitted the crop at all. On the contrary, the land that had not been manured, gave a somewhat better return.

Experiment 2.—It was made on an area of 18 Prussian square ruthen, (1 ruthe = 12 feet;) soil and aspect as in the first experiment. In 1845 the field had yielded a crop of winter wheat. In 1846,

A.—Six square ruthen were manured with 18 lbs. of Liebig's patent manure, for leguminous plants. By mistake, 18 lbs. were employed instead of 9 lbs., which would have been the proper quantity for that area, according to the instructions given by the firm of Messrs. Pfeiffer, Schwarzenberg & Co., of Hesse-Cassel:

B.—Six square ruthen were manured with stable dung.

C.—Six square ruthen were left without manure.

On the 4th of March, the area was sown with 7½ lbs. of vetches. The vegetation presented no difference on A and C; but was more luxuriant on B. The crop consisted, on A, of 63 lbs., viz: 15¾ lbs. of grain, 47¼ lbs. of straw; on B, 68½ lbs., viz., 18½ lbs. of grain, 50 lbs. of straw; on C, 63½ lbs., viz: 15 lbs. grain, 48½ lbs. straw. The grains from A, B, and C, present no difference as to their size and specific gravity; therefore Liebig's manure did not benefit the vetches.

Experiment 3.—On poor mountain-land there were sown with vetches:—A, (6 square ruthen,) manured after Liebig's system; B, (6 square ruthen,) manured with stable dung; C, (6 square ruthen,) without manure. The vegetation on A and C presented no difference whatever; on B, it was considerably more luxuriant.

I submit these statements without comment, being only anxious that the public should arrive at Matter-of-Fact. *Troy, June*, 1847.

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Results of Industry.—[The following furnishes a good example of what may be accomplished in farming by laborious industry and perseverance. There are probably many such in our country, and it is proper that they should be held up for the encouragement of others. The writer of this article, it should be remembered, is located in a region which many look upon as very unfavorable to agriculture.—Eds.]

I commenced clearing land from a wilderness estate in 1820; the growth was heavy hard wood of beech, maple, birch, with some hemlock and spruce. I felled but little each year, at first, as I had neither ox, horse, or man, to help me, unless I hired or exchanged my own labor for them; (the latter I often did.) I practiced clearing every movable thing from the land, sowing it with some kind of grain and grass seed. It scarcely ever failed to produce a good crop of grain, and afterwards grass in abundance, for ten, and sometimes for fifteen years. I have cleared, with the assistance of my own sons, principally, about one hundred acres of woodland. I have about twenty-eight acres well cleared of stones, which is in a good state of cultivation. My stock consists of oxen, cows, and young stock, to the number of twenty to twenty-five, one horse, and about forty sheep. I have plenty of hay for my stock, and sell from five to ten tons yearly. My barn, previous to 1846, was 40 by 50 feet, standing where the ground sloped to the southwest, about four feet in fifty. In 1846 I built an addition on the lower side of the old part, one hundred and two feet long and thirty wide. I have dug a cellar under the old part seven feet deep—dug a trench still deeper for drain under the wall, which is substantially built under the two sides and upper end of the old part, leaving the lower end immediately connected with the space or cellar under the new one, which is from six to ten feet deep,—without a single post to interfere with carting,—as the floor over it, with its contents, is supported by king posts. My cattle are watered under the new barn from a well. Young stock is fed at racks under the barn. The cattle are chiefly tied over the cellar of the old barn, and are kept abundantly littered with straw, &c. The manure is thrown into the cellar through a scuttle. JOHN McGLAUFLIN. *Charlotte, Maine, March*, 1847.

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GOOD MANAGEMENT.—Should some young and inexperienced farmer, with small means to commence business, be benefitted by this brief sketch from my pen, my highest object will be attained.

About ten years ago, I purchased fifty acres of land—forty improved, ten woodland—for which I paid $41 per acre. I had, by prudence and industry, laid up $500, which was all I was able to pay down. For the remainder I was in debt, and when I looked around on the old shattered buildings, and the rotten old fences, the prospect to a young, inexperienced farmer, just starting in life, was somewhat discouraging. I was determined, however, to have some *rules* and *regulations* about the matter. I soon became a reader of the Cultivator, from which I learned some very useful lessons and I determined I would stick to the old maxim—

"A little farm well tilled."

For the first four years of the above ten, I hired one man for about seven months per year; for the last six years, one man from eight and a half to nine months per year. This is all the help I have hired. One pair of horses has performed all my team work, and they have been fat winter and summer.

I have raised all kinds of grain except winter wheat. I will not occupy room in giving my experience in regard to cultivating all these crops, but will briefly describe an experiment I made in cultivating Indian corn.

I selected a piece of ground containing seven-eights of an acre, cleared off all the stones, and spread on the surface 25 loads of coarse manure, which was turned under with the sward, about three inches deep. After plowing, I spread about twelve loads of pulverized manure on the surface. The strongest of this was night-soil, the next hog manure. I harrowed it thoroughly, and planted it to eight-rowed yellow corn—rows three feet apart each way; hoed it three times. Perhaps I ought to state that I planted every hill of this corn myself, about the 6th of May. I was very particular in the work, so much so, that my hired man called me a "book farmer." However, I was proud of the name. In hoeing, I avoided the old fashioned way of billing ten or twelve inches high, and kept the ground nearly level, well stirred and loosened.

In harvesting my corn it was all measured in a bushel basket, every basket making, if shelled, a plump half bushel. I had 152¼ bushels of ears, equal to 76¼ bush. of shelled corn—or at the rate of 85¾ bushels per acre. The corn, at 68 cents per bushel, amounted to $51.85.

The corn-fodder was worth $3, and the pumpkins grown on the lot $2,—making the whole produce of the seven-eighths of an acre, $56.85. The cost of cultivation was $16, leaving $40.85 *clear profit*.

The following spring I plowed this piece of ground some two inches deeper than when it was plowed for corn, and sowed it to spring wheat, soaked in brine, and well rolled in lime. I had 22 bushels of the first quality, worth $1.50 per bushel, and which afforded me a clear profit of $28. The same piece was seeded to clover and timothy, and the third year from the time it was broken up, gave two tons of good hay, worth $8 per ton. Calling the cost of cutting, &c., $4, the clear profit from the hay was $12. Thus, seven-eighths of an acre gave a clear profit in three years, of $80.85, or $90.95 per acre.

I will give the product of ten cows for the last season. I commenced with eleven, but one by accident was rendered unfit for the dairy, and was slaughtered. My cows are not yet arranged to my mind, yet I have five which I value at $50 each—the remainder not more than $30 each. I sold from the ten cows 4,087 lbs. of cheese, and 812 lbs. of butter. Our family consists of four to five persons the year round. We used 220 lbs. cheese, and by estimation, 188 lbs. butter—making the whole quantity produced by the cows, 4,300 lbs. cheese, and 1000 lbs. butter. The cheese was sent to Boston, by a merchant of our town, and brought us over $6 per hundred. Our butter for the past ten years, has been sold mostly at New Lebanon Springs. As to quality, those who purchase it can answer for this.

In my course of farming I have made no expenditures except such as I have been able to make from the produce of the farm. I have expended $3,400 for land, about $1,500 for buildings, to say nothing of increase of stock, farming implements, fences, blind ditches, under-drains, &c. H. MATTISON. *New Lebanon, May* 20, 1847.

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CANADA THISTLE.—I will describe my mode of destroying the Canada thistle. It is one of the most troublesome plants that infest our soil, particularly in grain fields, where they must be worked with the hands of the laborer. We have resorted to various methods to destroy them, and have ascertained that by cutting them as close to the ground as we can with a scythe, in June, or while they are in fresh bloom, and the stalk hollow, will surely kill them. We sometimes have to cut them two successive years. I prefer cutting just before a rain, so that the water may get in the hollow of the stalk which will rot it. I will here state, for the benefit of the readers of the Cultivator, (for I calculate you are all farmers,) that I have had on my farm a great many Canada thistles, and when I have cut them as here stated, it has entirely destroyed them. I. W. CURRY. *So. Trenton, Oneida Co.*, 1847.

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BOG LAND.—I have a large body of low land, as black as charcoal, mixed with white sand, and a rooty fibrous matter, resembling peat. In some places, there is so much of the latter article, that in very dry weather, if fire is put to it, it will burn to ashes. It looks immensely rich, and as if it ought to be very productive. Yet, however dry and well drained, it will produce nothing but sorrel, and that of the rankest growth I have ever seen. Indian corn grows very well upon it, and looks well until it is about two months old, and then, when about two feet high, turns yellow, burns up, and comes to nothing. Have you any such land in your region of country? Do you know anything of its nature and character? Have the owners of it ever reclaimed it and made it productive, and by what means did they accomplish it? and why is it so unprofitable? or can you inform me what to do with it? A reply through the next number of the Cultivator will greatly oblige your subscriber, JNO. COOKS. *Ætna P. O., Hanover Co., Va., March* 17, 1847.

[We are inclined to believe that the failure of crops above spoken of, is chiefly attributable to two causes, viz., the want of proper mineral elements in the soil, and the ungenial nature of the peat with which the roots of the plants are brought in contact. It is often the case, in similar soils, that only a few inches of the top—that which is decomposed by the air—becomes suited to the growth of cultivated plants, while the remainder lies a sour and inert mass. Crops on such soils, sometimes grow well till the roots reach the undecomposed peat, which they will not penetrate to any extent; but on examination will be found matted together at the bottom of the loose surface soil.

To remedy the difficulty complained of, we would recommend that the soil, (it having been properly drained,) be first plowed to a good depth—eight to ten inches. This might be done in autumn, or fall. In the course of the winter spread on two to three inches of gravel or loam. When the soil is in suitable condition to work, let this be well harrowed in, and afterwards more thoroughly mixed by plowing—running the plow rather shallow at first, and going deeper at succeeding plowings. After this, a slight dressing of wood ashes or marl applied to the surface, will be found useful. We have seen the heaviest crops of Indian corn and grass produced on such lands, by this, or a similar management.—Eds.]

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PUTTING UP GARDEN AND FLOWER SEEDS.—A correspondent with the signature of "N," who dates from Bedford County, Va., gives us some observations in regard to the disappointments which are frequently experienced by seeds not vegetating. He suggests as a remedy against the evil, that each paper be labelled in a particular manner, as a form for which he gives the following:

"Early York Cabbage, grown by (or sold by) David Landreth. Jan. 1, 1847. Good for 5 years," (or as the case may be.)

He observes—"Now, don't you readily perceive the force of this endorsement? Not one person in ten in the country, are at all conversant with the germinating properties of the various seeds. Those who put them up know how long they will remain good; then why not reveal it to their customers? They certainly don't wish to sell a shadow for substance, or commit a fraud. I sincerely hope that some such mode as the one above suggested, will be forthwith adopted, and hope you will loudly call the attention of dealers to this subject. We certainly want something of this sort."

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SINGULAR SWARM OF INSECTS.—A neighbor, a physician, and likely to be accurate, sometime in the course of last summer, saw what he supposed to be a swarm of bees, clustered on a limb of an aspen tree, near his dwelling. He sent for a hand to hive them; but lo, on approach, they proved to be a swarm of *tumble-bugs!* When a window near the cluster was opened, the whole room was filled with the peculiar odor of the beetle. This was at evening—in the morning they were gone—my friend having no desire to house them. The cock-chaffer, or Dorr, *Scarabœus vorax*, is said by Rees to be "found in swarms, sitting on the hedges;" but I am not aware that the tumble-bug generally swarms. W. F. BRAND. *Davidsonville, Anne Arundel Co., Md., April* 16, '47.

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LARGE HOGS.—I send you the weight of six hogs killed in this town in the month of December last, with their ages at the time they were slaughtered. The breed is without a name, but is probably the result of several crosses of native breeds; they are usually white.

Chester Nye,	one hog,	age	22	mos.,	weight	636	lbs.
Solomon Abel,	"	"	21	"	"	591	"
Septimus Loomer,	"	"	21	"	"	593	"
George Wright,	"	"	16	"	"	550	"
Samuel F. West,	"	"	21	"	"	518	"
" "	"	"	21	"	"	660	"

Whole weight, …………………… 3,548 lbs.
Average weight, 591⅓ lbs.

I believe that there were about twenty hogs slaughtered in this town last fall and winter, which weighed over 500 lbs., and also the same number of pigs that weighed over 300 lbs. each, some weighing near 400 at eight and nine months old. JOHN S. YEOMANS. *Columbia, Ct., April* 24, 1847.

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CUTTING BUSHES.—I noticed, several years since, a communication stating that the best time for cutting bushes, (grubs,) was when the leaves had become fully expanded. It struck my attention, as I recollected, in a leisure hour, to have cut or beat down the bushes on a small spot, and they were almost all killed. I have since cut bushes when the leaves had become fully expanded, or as soon as they had commenced growing most vigorously, and fully agree with the writer, that one cutting at this time is worth four at any other time in the season. The sprouts, if any, will be feeble, and may easily be killed by close pasturing with sheep. The sap flows freely at this time from the stumps, (stubs,) and exhausts the root of its vitality. Be careful to cut all the sprouts from the root. R. WATKINS. *Napoleon, Michigan.*

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AGRICULTURE IN WISCONSIN.—For some time past I have contemplated writing you a few lines from this beautiful and enterprising territory; but have delayed, hoping to hear from some of our Wisconsin farmers, who are more directly interested in the subject of agriculture than I am. We have a delightful climate, a rich and fertile soil, containing more feet of rich vegetable mould than the New England states on an average can boast of inches, every natural advantage possessed by any country, and with a *good Constitution*, (which we hope ere long to have,) good laws enacted, and good citizens, which are flocking here by thousands, Wisconsin will soon become one of the most desirable sections of this Union. I am not a farmer, but if there is any period to which I look forward with pleasure and anxiety, it is to that, when I may be actively employed in agricultural pursuits, believing that no avocation in life is more honorable, more noble, or more conducive to one's happiness than that of the farmer's; and I am happy in the belief that the day has passed when "contempt is cast upon the husbandman."

Agriculture as a science is rapidly becoming more important, and attracting the attention of our best and most enlightened citizens. It is the noblest, for it is the "natural" employment of man. The intelligent and independent farmer is ever respected; he holds an important and responsible place in society. Upon him devolve many duties; upon him rest many obligations. Living not in the hum and bustle of human cities, where he would be continually in the whirlpool of political and other excitement, he can examine questions of a moral, political, and religious nature, with a cool head, calm mind, and an unbiased judgment. To him community generally looks for correct opinion, and in him they usually find a safe counsellor, and a correct adviser. Would that *all* of our farmers could be induced to cultivate their *minds* and hearts as well as their acres. They can reap as rich rewards in the mental as they can gain profitable crops in the natural world. Without learning it is impossible for a man to be a first rate farmer. Without intelligence he cannot discharge in a proper manner the duties devolving upon him as a citizen. Agriculture is a science that requires great experience and study. Men must be educated to be farmers, as well as lawyers, doctors, or divines. And there are thousands of young men, even in our midst, (we have 84 lawyers,) who are in stores and offices, who ought to engage in agricultural pursuits. It would be better for them—better for this territory, and better for the country at large: And who among the number would not rather be an *independent* farmer than a petty shop-keeper, or a fourth-rate lawyer. Who would not rather be first in the noblest of all pursuits, than to be least in one which the world calls honorable? Let young men seek for our rich Wisconsin lands rather than for situations in stores, offices, or in what the world falsely calls the learned professions.

A few words as to the circulation of the Cultivator, which is rapidly gaining favor, especially with those who have been acquainted with it for the last year or two, and is now read with much interest by many of the merchants and professional men of our city. J. A. H *Milwaukie, Wisconsin, April* 10, 1847.

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Rotation—Use of Muck—Lime.—I thought a little sketch of our manner of farming might interest you. We go on the five year system; beginning with corn, or buckwheat, next oats, third wheat or rye; then seeded with timothy or clover two years. Some haul out their manure in the spring, unfermented, for corn, and some let it lay until fall and put it where they wish to plant the following year; while others heap it up in June, and put it where they sow winter grain. Corn yields about thirty bushels to the acre. Oats about the same, and rye and wheat about fifteen; although a great many crops exceed those rates, as we had last year in this neighborhood, some oats that yielded seventy bushels to the acre. In the fall of 1842, I hauled out some muck and bedded my barn-yard with it. The next June I heaped it with the manure which I made that winter, and in the fall of 1843, I put it where I sowed my wheat, and when I came to harvest it, I found a clean bright straw, well loaded. I pursued the same course in 1844, also, and with the same result.

I commenced using lime in the fall of 1844, spreading it on my ground after it was plowed the last time, just before sowing. I could not see any difference in the crop on that which was limed and that which was not. In the spring following, I put some lime on my sward, (about the same rate as above,) say one hundred and fifty bushels the acre, and planted it to corn, without any visible effect, and the next year to oats, when the limed ground was very easily distinguished by its rankness and greenness, even until harvest. The soil on which the above experiment was tried, is gravelly. My lime I burned myself. It was not the finest kind.

I think many mistake the worth of muck by hauling it out and plowing it under too soon. I have confidence in lime and muck, and especially in the latter, for my gravelly ground. Lime, I think, is very slow to act. Philip D. Cookingham. *Pleasant Plains, Dutchess Co., N. Y.*

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Breast Plowing.—I am very much inclined to believe that the use of the breast plow might be beneficially applied in this country; more especially where the couch grass is so prevalent. There is no weed so injurious to the soil, or more impoverishing, and it chokes out almost every thing else sown upon the land; but when once it is banished may be easily kept clean. I have seen, in many instances, whole farms completely matted with it, the land bound together by this pernicious, clinging, stealing, creeper.

For instance, suppose a piece sown to wheat in the fall, with this ravenous plant stretching its roots in every direction, in search of the choicest food the land contains. It will not leave a spot unexplored, and the best food must be devoured by it. I know of no *enemy* that deserves a declaration of war so much as this. There is nothing on earth that more deserves death, and I know of no better instrument to accomplish this purpose than the breast-plow.

When the little wheat is cut, which may grow on land under such circumstances, put the breast plow in, and cut the sod off about an inch thick, with the stubble, grass, and roots turned over together. When sufficiently dry, put it in heaps and burn it, spread the ashes, and plow with a very shallow furrow. Let it lay a short time, (say a fortnight,) and then cross-plow it, leaving it in that rough state the whole of the winter, which will give the frost a chance to kill the whole, and in the spring you will find the soil as mellow and friable as desirable. It will bear almost any proper crop that you choose to put upon it. The choice food which this worthless plant has been gathering together, is converted into food for other plants, and will quickly dissolve to feed the crop you wish to grow. I would advise every farmer to keep this dangerous enemy from his farm, for it consumes more of his substance than he is aware of. Wm. H. Sotham. *Albany, June* 4, 1847.

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Challenge in Reference to "Black Hawk."—Our attention was called by a friend, a day or two since, to the advertisement in your May number, headed "*Vermont against the World.*" The conditions of that challenge are such that I presume the Messrs. Hill do not expect to find a competitor on the day named; for the competitor is to be superior to *Black Hawk* in *all* the respects mentioned, or Black Hawk takes the prize. So far as we know, Black Hawk is "the best and most perfect broke [entire horse] in harness" in the world. He would therefore take the prize on this ground alone over any horse that might be offered, though inferior to his competitor in the other particulars. We presume no one will take the field against Black Hawk under such conditions.

We should be happy, however, to meet him with "*Sir Henry,*" and would not object to going to New-York for the sake of comparison, provided any *reasonable* conditions can be agreed upon. We have been accustomed to consider the prime requisites in a stock horse to be—1st. *Superiority of form,* by which we mean those points which conduce to *action, strength,* and *endurance,* so symmetrically and perfectly combined as to sacrifice neither of these, and to result in the greatest *beauty.* This the horse himself must show. 2d. The power of transmitting this superiority to his offspring. This his stock must show. If the proprietors of Black Hawk are willing to submit the decision to such a test, we will not trouble them to go out of Vermont to find a competitor. To be sure, "Sir Henry" has won victories enough at the N. Y. State Fair, and a *fourth* triumph would be of no great consequence; so that, though we should prefer to meet Black Hawk here, at home, where people are more directly interested—say, for instance, at Montpelier, in October next, where the whole state will be represented—yet we will not object to any reasonable arrangements as to time and place. We hope to send you an engraving of Sir Henry before long. Very respectfully, Lucius Sanderson & Co. *Burlington, Vt., May* 21, 1847.

P. S.—Perhaps the proprietors of Black Hawk would prefer to put the decision on the answer to the following question:—"Which is the best horse as a getter of roadsters?" If so, we would not object. L. S. & Co.

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Agricultural Advantages of Illinois.—The high prices in Europe affect the interests of the farmers this way favorably, but not to the extent, in proportion, other sections of the United States enjoy, owing to their greater facilities of transportation. However, we shall soon be more favored in that respect, for the Michigan and Mississippi canal will be in working order next spring, and two railroads are about being commenced, crossing the state, uniting the lakes and eastern states, with the Father of Waters. With these improvements, Illinois will at once so extend her cultivation as to give a surplus of ten to twelve millions bushels of wheat, more of Indian corn, and other products in proportion.

We look to the doings of the National Convention, to be held at Chicago, on the 5th of July next, for much good in improving and extending navigation over our great lakes and great rivers, and in stimulating private enterprise in furtherance of railroads, canals, &c., especially over the western prairies, the beauties and riches (naturally) of which are so little known. Yet the immigration this way has vastly increased, annually, since 1843; and the present year will, probably, show greater than usual increase, as we are led to suppose the numbers flying from famine in Europe, will far exceed any previous year.

I have noticed with pleasure the movements making for extending the raising and keeping of sheep in North Carolina, Western Virginia, &c., and wish all success; and if the parties conduct the whole enterprise judiciously, and have patience and perseverance for three or four years, they will command success. I have found that at least three years are necessary for acclimating a flock in a country differing in climate, feed, surface, &c., from that where they were raised, so that the result is *quite* satisfactory. My flock, since the spring of 1844, when I began to keep sheep on these prairies, have done better than almost any other flock of which I have knowledge, (and there were many brought into northern Illinois about that period.) Yet they suffered considerably from the changes—many died—others lingered—fleeces were inferior, and they did not breed well. But these obstacles, I observed, decreased every year, and encouraged me to persevere, feeling assured as I did, that with such fields, and so extensive, of rich grass to range in, a surface so elevated, rolling, and dry, with far less rainy, vapory weather, than in the eastern states, there could be no doubt that when once the animals were *acclimated*, they would thrive here at least as well as elsewhere, and this season has proved I was not mistaken. for the sheep are in *admirable order* in *ALL respects*. Those bred here I think preferable to any driven in, however long the latter have been in the country. Up to this time, I have not known any of those diseases that make havock with the sheep elsewhere, among the animals here.

There were many persons who began sheep keeping this way, within six years, but they soon gave up, and without a fair trial, because all was not at once satisfactory.

Wolves, though they were numerous when I entered upon sheep keeping, and for two years preyed extensively on my flock, especially on the lambs, have done me no harm since last May—now a year since. I attacked the "varmints" with poisons, by hunting them over the prairies and to their dens, giving them no rest, especially in the spring, the period of breeding, and the result is satisfactory. 'Tis true, they destroy animals within some few miles of my place, but with their peculiar cunning, they have learned my *boundaries*, and respect them.

With my experience now, were I about to gather a flock of sheep for these prairies, I would give preference to those raised here, even at much higher prices than those lately or just driven in. I deem the former cheaper, *intrinsically*, (of course other points equal,) at $3 or $4 per head, than the latter at $1 to $2—to say nothing of vexation and disappointment for three or four years, wearing upon one's temper.

There are several first rate farms for sale around me, beside two or three of my own, and at fair prices—each combining rich prairie timber enough, with streams and springs of pure water.

I shall take pleasure in giving all information in my power regarding this section of country, either by replying to letters, or personally, to those who may call upon me.

The population around me, say within a circle of twelve miles, has about doubled since 1843, made up of good, honest, industrious settlers, generally from the middle and eastern states.

Taxes here are about 40 per cent. *less* than in Wisconsin. I state thus much unhesitatingly, for I have compared the taxes by visiting that territory.

The prairies are covered with fresh grass, and look like a vast emerald, dotted with numerous flowers.

By the way, I would state that I have laid out an extensive orchard of various fruits, and have planted last and present season some 600 trees—say, apples, pears, cherries, peaches, plums, &c., &c. Generally, they thrive well—especially the apples. JOHN SHILLABER. *Dixon, Ill., May* 25, 1847.

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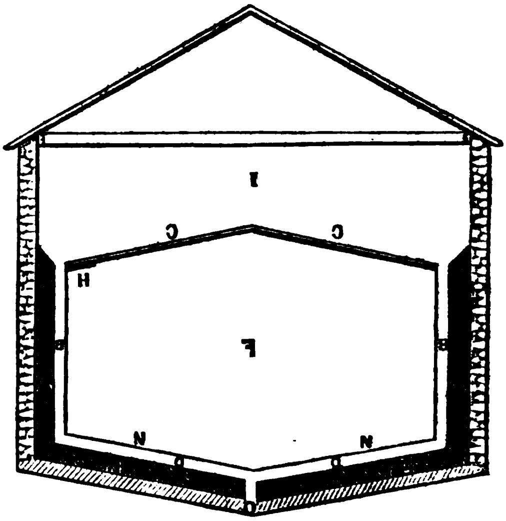

KEPHART'S PATENT FRUIT AND VEGETABE PRESERVER.—The outer columns in the above cut, represent walls of stone, enclosing the inner construction. The light shading at the bottom, descending to the centre, represents the earth. The dark shadings, *A. A.* and *K. K.*, represent two boardings, with from six to ten inches space, and this space filled with a substance that will exclude heat. *F.* is the fruit room, in which articles are to be placed for preservation. *C. C.*, a floor, or cover, to the fruit room, made water tight, with a coat of pitch over its surface, to prevent moisture from penetrating. *I.*, an apartment to be filled with ice, supported by the floor *C. C.*, and designed to contain ice enough when filled, to last during the year. *B. B.* and *D. D.* are spaces around the fruit room, intended for the meltings of the ice on the top floor, to pass off. This ice water, as it passes down these spaces around the fruit room, and over the tight floor at bottom, in the space D. D., serves to absorb any heat which may find its way through the non-conductor, *K. K.* *O.*, the outlet for ice water. *H.*, hatchway, or entrance into the fruit room. The fruit room, *F.*, is intended to be below ground, and the ice apartment, *I*, if desired, can be above; buildings above ground being more generally preferred for ice to those below ground.

It will be seen from the construction, that the non-conducting substances, *A. A.* and *K. K.*, are designed to prevent the admission of heat from the earth at the sides and bottom, into the fruit room *F.*; while the ice upon the floor *C. C.*, acts by keeping the fruit room at a constant uniform temperature, and so cold as to exert a preserving influence upon articles placed therein.

As will be seen by the above drawing, its success depends entirely upon chemical truths. The room F., in which fruits, &c., are placed for preservation, will remain the whole year at a constant, uniform temperature, so near the freezing point as to arrest the rotting as well as the ripening process of fruits, &c., without danger of freezing them. That the fruit room *F.* will remain at this temperature, will be evident from the fact that the air in contact with the floor *C. C.*, on which the ice rests, becomes nearly as cold as ice itself. This condensed air will immediately sink, while the air at the bottom of the room, if but half a degree warmer, will rise to the floor *C. C.* and give off its heat; thus maintaining a uniform temperature, corresponding with that in contact with the ice floor *C. C.*

Articles placed in the preserver remain as perfectly dry and free from moisture as if kept in the best ventilated apartments. The air, descending from the floor *C. C.*, being always half a degree colder than the boxes or barrels of fruit, &c., cannot deposit any moisture thereon, it being an established fact that no object can condense moisture unless colder than the atmosphere coming in contact with said object. It is a theory long established by chemistry, that a temperature, dry, uniform, and near 32° Fah., will arrest the process of decay that takes place in fruits, vegetables, &c., but never, until the above invention, could the truth of theory be tested. Two years of experiments prove the truth of the above theory, and establishes the entire utility and success of the invention, as fruits, foreign and domestic, viz., oranges, lemons, figs, apples, pears, peaches, plums, grapes, &c., as well as the most delicate fruits,—also potatoes, green corn, melons, &c., can be kept as long as desired. Add to these, butter, eggs, bacon, &c., can be kept through the entire year as fresh and sweet as when first put in the preserver. Fruits, in common temperatures, undergo saccharine fermentation, or what is known by the mellowing or ripening process, which is followed by vinous, ascetous, or putrefactive fermentation, which completely destroys the fruits. A temperature so low, arrests, and almost entirely prevents, the first process towards decay, so that all fruits kept in the preserver will retain all their juices, freshness, and flavor, as when plucked from the vine or tree. [See advertisement in this paper.] Flack, Thompson & Brother. *Spring Garden P. O., Philadelphia, Pa.*

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Farming, and causes of Improvement in North Carolina.—How many plows do you run? How much land do you tend? are the usual questions asked when farming is the topic. The custom in this country, is to pitch a large crop, spread over a vast area of poor land, without calculating the labor. The consequence is, grass gets ahead, and hands are worked almost to death to keep it under, and when gathering time comes there is little to show for it. I confess that from the want of knowledge and experience, I was deluded this way myself. Last year I tended 25 acres less than usual, and found an advantage in the measure. My hands were less worried, for they kept ahead of the grass; they had more time to devote to their own affairs, my crop was better tended, and I made more corn than I did when I cultivated the omitted 25 acres.

I shall in future study to reduce, and not enlarge my plantation. The old Roman acted wisely. He had but a certain quantity of land under cultivation, and three sons. When one became of age, he gave him a fourth of his farm, and still made as much from what remained as before. When his second and third sons arrived at the same period, he gave each a fourth, retaining a fourth himself, and yet be made as much from the part retained, as when he cultivated the whole. Phocion, when found in a deep study, was asked what he was thinking about. "I am thinking," said he, "how I shall shorten what I have to say to the Athenians." As there is generally more substance in a short, than in a long and elaborate oration, so a little land well tended and well manured, will produce much more and with less labor than a large tract badly tended and badly manured.

From my own observation, and what I hear from others, agricultural improvements are progressing in every part of our state,—in manuring, in raising stock, and in every branch and department of the calling,—all seems to be life and activity. I have asked myself the question, what can be the cause of all this? The answer is at hand—it is the improvement of mind, improved by reading on the subject of agriculture. Public attention in this state, was first awakened on this subject by Taylor's "Arator,"* followed by a little work by a native of this state. Next in the order of succession comes your own "Cultivator;" then the North Carolina Farmer, a respectable periodical of about two years standing. I have no doubt a perfect revolution will be produced in the course of a few years.

Before the publication of "Arator," farming was at its lowest ebb—farms were deserted—and there was a perfect rush to the west. The roads were filled with families in the most destitute condition. I well remember once having witnessed a spectacle which filled me with sadness. It was a man harnessed to a little cart loaded with four small children, a bed, and cooking utensils, while three children and the wife were walking by his side, all bound for the land of promise, the "far west." Emigration, thank God, has measurably declined. I have learned with regret, that a painting has been exhibiting in the rotunda of the Capitol, at Washington, in ridicule of North Carolina emigration, in which the poverty of the emigrants is made the subject of jest. I speak of this state of things not to excite mirth, but with sensations of sorrow; and he, in my opinion, has a bad heart who can look with complacency on, and make a jest of human suffering. J. D. J. *Topsail, N. C., April*, 1847.

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Pressing Hay.—There seems to prevail great inexperience among us of the south, as to the *best*, *cheapest*, and *simplest* mode of packing, pressing, or baling hay; or of constructing the apparatus on an effective and practicable plan. As our northern friends are more skilled and experienced in these useful matters, and as it is the province of your very useful and valuable paper to afford us knowledge in, and give us information on whatever appertains to the agricultural interest and advancement, we solicit you, through its pages, to acquaint us with the various methods by which our northern farmers perform with so much facility the work of packing their hay into bales. C. Z. Wood. *Craven Co., near Newberne, N. C., May* 10, 1847.

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"Irish Rose Butter."—I perceive that in the proposals issued some time since by the Navy Department, at Washington, for the supply of butter for the Navy, "Irish rose butter" is the standard to which applicants are required to conform. I have been somewhat acquainted with Irish butter, but this particular description I do not recollect to have seen. I have examined, somewhat extensively, English works, to ascertain the peculiarities of this butter, but can as yet find no account of it. I understand all the department expects is, butter which will stand a five years' voyage. This they obtain in one locality mainly. I wish to inquire through your paper, the process of making "Rose butter," if known, and I should like to know also whether *all the butter* from the state of New-York, which goes to the supply of the American Navy, is actually made in *one* county, which sends far less butter to market than many counties in this state; and is not butter, if of as good a quality in every respect, made in central and western New-York, as the state affords? J.

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* "Arator; being a series of Agricultural Essays, Practical and Political; in sixty-one numbers: by Col. John Taylor, of Caroline county, Virginia. Baltimore, 1817."

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Wheat in Virginia.—Your correspondent, William Bacon, in the February number of the Cultivator, says, "The wheat crop is not abandoned because exposed to rust. Farmers have learned to manage the crop so as in a great measure, to avoid its influence." In this part of Virginia, the rust has caused great injury to the wheat crop every year but one since 1839; indeed, on some entire farms, and many fields which once produced fine wheat, the crop has of late years been destroyed, so as to not be worth cutting. If Mr. Bacon will instruct us how to prevent it, he will be a public benefactor. You will much oblige me by calling his attention to the subject. **Micajah Davis, Jr.** *Lynchburgh, Va., March* 13, 1847.

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To Measure Hay in the Mow or Stack.—More than 20 years since, I copied the following method of measuring hay, from some publication, and having verified its general accuracy, I have both bought and sold hay by it, and believe it may be useful to many farmers, where the means of weighing are not at hand.

Multiply the length, breadth, and height into each other; and if the hay is somewhat settled, ten solid yards will make a ton. Clover will take from 11 to 12 yards for a ton. H. A. P.

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Wool Depots and Sheep.—In the July number of the Cultivator for 1845, I called the attention of wool-growers to the Depot, then about being established for the sale of wool, by **H. Blanchard**, at Kinderhook; which at that time was a matter of experiment, and had nothing practical to commend it to the notice of those concerned; but now, after a trial of two years, I feel justified in recommending it to the patronage of all who have wool to sell,—as a successful and beneficial operation; because I have been satisfied with the sale of my wool; because it has given general satisfaction; and because it is admitted by all with whom I have conversed on the subject, that the wool in this section has been sold higher than it would have been had there been no depot. My wool has sold for the last two years, for more per pound at the depot, than it did the three years previous, notwithstanding the market price has been from eight to ten cents lower. Wool at the depot is sold upon its merits, and brings all the manufacturer is willing to pay; because the agent knows its value, and understands the market as well as the buyer. Not so with the grower; he has no means of knowing its exact value; because he does not know how it will compare with the different sorts of the manufacturer. No two lots of wool will assort alike, and a man that is not conversant with the business, and has not had practice, is altogether incompetent to do it; and if he cannot assort wool well, and does not know the prices of the different sorts, he cannot be a close judge of its value; hence he is liable to be cheated, because the buyer knows its exact value, and when he has no competitor will seldom pay it. If he is a speculator, he buys low to make money; if an agent, to suit his employer. Another reason why wool-growers in this section should patronize the depot, is because there has been no competition for many years to any considerable extent; as one man has been the principal buyer in Columbia and Rensselaer counties in this state, and Berkshire in Massachusetts, and before the depot was established, if we did not sell to him we could not sell at all; why this is so I know not; but wool-growers generally believed there was a combination or understanding among the buyers, that each one should buy within an allotted territory, and that belief was one of the principal causes which led to the establishment of the depot

While writing, I wish to say a few words on the importance of greater improvements in flocks. I suppose two-thirds of the flocks in this section that do not have particular attention, do not, at the present low prices, produce more than about one dollar's worth of wool per head. Now I suppose with a trifling expense for better bucks, and with a little attention to the selection of the most unprofitable sheep, (which should be sold or killed,) any such flock in a short time, may be so improved as to enhance the value of the fleece twenty-five cents apiece, and in a short time more, another twenty-five cents may be added.

All we add to the value of the fleece, is profit, as a sheep that yields but two and one-half pounds, requires as much feed and more care than one that yields three and one-half pounds.

I have had the same stock of sheep for twenty years, and have improved them till they have averaged me for the last five years, from three pounds five to three pounds nine ounces per head, which sold at the depot for forty-four cents per pound, and the fifty cents per head I get more than the owner of an ordinary flock, comes of improvement. **Daniel S. Curtis.** *Canaan Centre, June* 14, 1847.

ANSWERS TO INQUIRIES.

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Machine for Sowing Clover Seed.—A Subscriber, Perinton, N. Y. The notice to which you refer in the *Genesee Farmer*, was taken from the *Franklin Repository*. The machine for sowing clover seed, was stated to be manufactured by **Richard Woods**, Chambersburg, Pa., and the cost was said to be "about" three dollars. We have no other information in regard to it. There may be other machines designed for the same purpose, which will answer as well or better. If there are such we should be glad to hear of them.

Oil-Cake for Ewes.—A Subscriber. We have often known oil-cake fed in moderate quantities, to ewes before lambing, without any injurious effect; but with decided advantage. It may be given freely after the ewes have lambed, and will produce a large flow of milk.

Millet Seed.—A Subscriber. We presume *ground* millet would be good horse-feed; but on account of the smallness of the seeds, we should not suppose it would be worth much for this purpose in its whole state.

Hand Threshing Machine.—W. H. J., Smithfield, R. I. At the present time we do not know of any hand threshing machine in use

Muck for Manure.—L. P., Proctorsville, Vt. We shall shortly furnish an article on the best mode of managing muck for manure. For the present, we can only say, mix it with unleached ashes, if they are to be had conveniently, at the rate of from one to three bushels per cart load. Let it lie in heap a month, if practicable, before it is used.

Transplanting and Grafting Hickory Trees.—The best mode of raising hickory or walnut trees, is by planting the seed in nurseries and transplanting them when four or five feet high. The nuts should be planted as soon as they fall from the tree, or be kept till put in the ground in such a situation that the kernel will not shrink. It is said in **Downing's** "*Fruits and Fruit Trees*," that the different kinds of walnut may be grafted, "with due care, on the common hickory." If this has been successfully tried in this country, we should be glad to learn the particulars.

Sheep Killed by Dogs.—W. R. Putnam, near Marietta, Ohio, had 50 sheep killed by Dogs; and Judge Richardson, of Auburn, N. Y., had more than 60 killed in one night.

AGRICULTURAL SOCIETIES.

N. Y. State Ag. Society.—The Executive Committee met at Saratoga Springs, on the 3d of June, the President, Geo. Vail, Esq., in the chair. The ground selected for the next Fair, was a field of twenty-three acres, a short distance from Congress Spring, opposite the old race course, easy of access from different parts of the village, and surrounded with public roads. This field, on one side of which is a beautiful grove, will be enclosed for the exhibition. Plans were submitted for the necessary buildings, and Mr. Johnson, the Secretary, and Dr. Thompson, of Cayuga, were appointed a committee to superintend the preparation and arrangement of the grounds and buildings, under whose direction such arrangements will be made, as cannot fail to give satisfaction to the thousands who will be present at the Fair. The Judges to award the prizes, were appointed, together with such committees as were deemed necessary to carry out all the arrangements for the ensuing exhibition. From the spirit thus far evinced by the citizens of Saratoga, there can be no doubt, but that the public will find on their arrival at this beautiful village, that everything has been done that was requisite for the comfort and convenience of visitors, and for a fine display of the articles presented by exhibitors.

A committee of arrangements was appointed on the part of the society, consisting of George Vail, Pres't., Troy; B. P. Johnson, Albany; T. J. Marvin, W. A. Beach, J. T. Blanchard, J. A. Corey, Saratoga; Samuel Cheever, Bemis' Heights.

A committee of reception of strangers and guests of the society who may be in attendance, was appointed, consisting of Chancellor Walworth, Hon. John A. King, E. C. Delavan, Hon. Samuel Young, J. A. Corey, G. M. Davison.

A copy of the Transactions of the Society for 1846, published by the legislature, was presented by the secretary, and he was directed to give notice to Presidents of county societies, that forty copies of the same for each society, bound, would be forwarded on application to him at the society's rooms—the expenses of box, packing, &c., $1, being forwarded to him.

The President and Mr. McIntyre, were added to the committee on the removal of the remains of the late Judge Buel; and the committee were instructed to take measures for the removal of the remains and monument to the lot selected at the cemetery, at the expense of the society.

The American Herd Book was added to the money premiums on Durham cattle.

After the reading of letters from gentlemen in different parts of the country, the acknowledgement of donations to the library, &c., the Board adjourned to the 2d Thursday of July, at the Society's Hall, Albany, at 10 A. M.

☞ Those who intend to compete for premiums at Saratoga, should remember that all animals and articles must be ready for examination on the *first day* of the exhibition—that is, on the FOURTEENTH OF SEPTEMBER. The first day will be devoted exclusively to the examination by the judges, of the animals and articles exhibited, and *no persons* will be admitted within the enclosure on this day, but the officers of the Society, judges, and exhibitors.

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Erie County, N. Y.—The Cattle Show and Fair is to be held at Buffalo on the 22d and 23d days of September. The address will be delivered by O. Allen, Esq., President of the Society. There are seventeen classes of premiums, embracing all descriptions of live stock, field crops, dairy produce, implements, fruits, &c.

Seneca County, N. Y.—Annual Exhibition to be held at Ovid, on the 14th and 15th of October. We have received a pamphlet containing the list of premiums, which are numerous and liberal. We notice a regulation in regard to the premium on Indian corn. The corn is to be weighed in the ear, and each bushel is to weigh not less than seventy-fivepounds.

Saratoga County, N. Y.—Show to be held at the village of Ballston Spa, on the 8th of September next. The premium list makes a highly respectable appearance. Fifty copies of the Cultivator are awarded in premiums, for which we return our thanks.

Onondaga County, N. Y.—We have received a copy of the premium list of this society, but are not informed at what time or at what place the annual exhibition will be held. We notice the society offers in premiums several copies of the Cultivator.

Yates County, N. Y.—Show and Fair to be held in Penn Yan, October 1st. A very extensive list of premiums is offered, embracing all branches of agriculture, horticulture, &c. The society has our thanks for its liberal patronage of the Cultivator, which it offers in premiums.

Cortland County, N. Y.—We have received a copy of the premium list of this society, but are not informed as to the time and place of holding the next show.

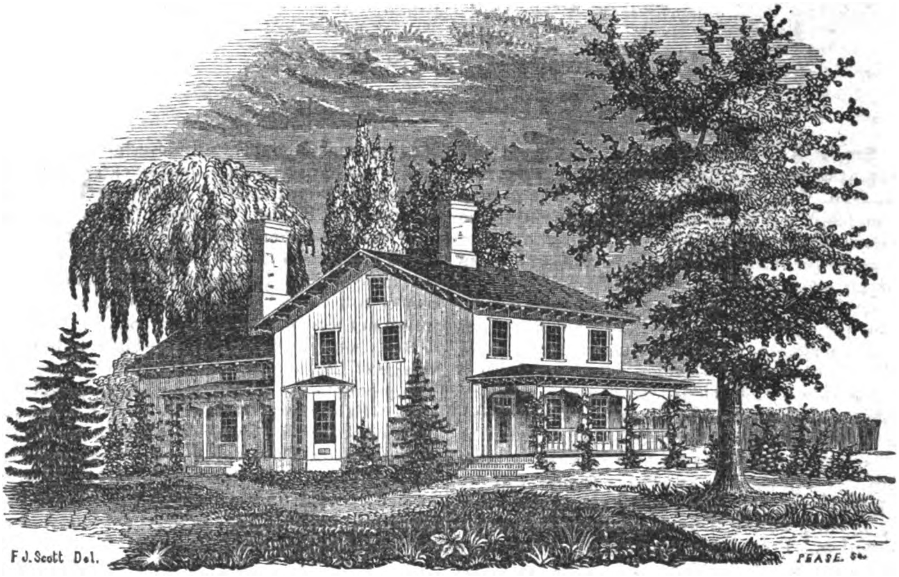
Caledonia County, Vt.—Fair to be held at St. Johnsbury Plain, Oct. 7th. This society carries on its operations in a spirited manner, and its exhibitions and other visible results, prove that the course of improvement in this section is onward.

Rutland County, Vt.—The show will be held at Rutland, on the 29th and 30th of September. The officers of the society are—Hon. Frederick Button, President; Wm. L. Farnham, of Poultney, Wm. R. Sanford, of Orwell, Vice-Presidents; John.C. Thrall. of Rutland, Rec. Secretary; Wm. C. Kittredge, of Fairhaven, Cor. Secretary; James Adams, of Castleton, Treasurer; Samuel H. Kellog, of Pittsford, Auditor.

Worcester County, Mass.—This society holds its Exhibition on the 23d of September next, at Worcester. The liberal premiums and the widely extended reputation of the society, will no doubt, as usual. bring crowds to the exhibition.

Bot Fly.—In the Ohio Cultivator, L. A. Baker says, that the bot-fly has "a bad, sneaking habit," which he has never seen noticed by any author. After buzzing about the horse's legs and mane a short time, it darts with great speed at the cavity beneath the jaws, and instantly inflicts a severe wound, from which the blood oozes; and that it is this occasional and painful attack, for which he has discovered no reason, that gives horses such a terror for these flies, which otherwise would not be noticed.

Durability of Manure.—A writer in the Farmer and Mechanic states that he has noticed the bottoms of coal-pits, between 65 and 70 years after the burning, so fertile that they invariably bore heavy crops of grass or grain. This manure, it is known, consists of burnt earth, ashes, charcoal, &c. Common barn manure becomes nearly or wholly exhausted in a comparatively short period.

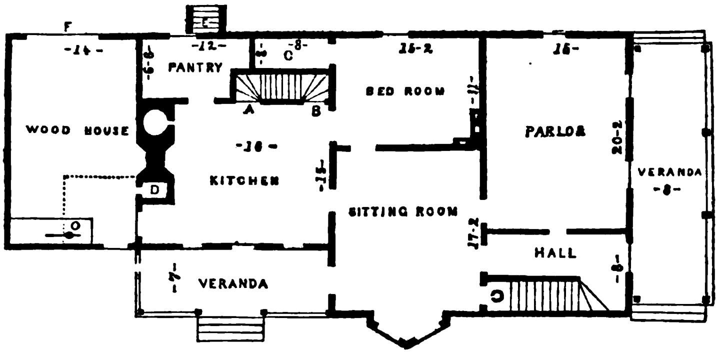


F J. Scott Del. PEASE. Sc.

A COMMODIOUS FARM HOUSE.

Eds. Cultivator—I herewith send you a plan and sketch of a commodious farm house. I have not endeavored, in planning this house, to get the greatest number of rooms in a certain space, or to have it most showy at a given expense, but to make it everywhere convenient, commodious, and tasteful.

The main house is thirty by thirty-two feet, two stories high, with a large well-lighted garret. The rear is 23 by 28 feet, including the wood house, and is a story and a half high. The first story is intended to be ten feet high, the second nine.

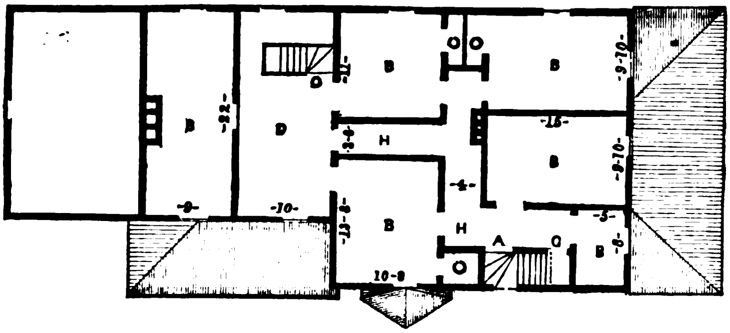


Ground Floor.—Fig. 47.

By a glance at the plan, fig. 47, it will be seen that there is a veranda extending across the front of the house. Through this we enter the hall, which is lighted by a window over the door; at the left, as we enter, is the principal stairway; on the right, is the parlor—a large and well-shaped room, with two windows on one side, looking out through the veranda, and one at the end, looking in another direction. Proceeding through the hall, we enter the sitting-room, which is lighted by a bay window in the end, and a door-window opening into the back veranda. From this room are doors opening directly into the parlor, bed-room, and kitchen. The bed-room, with the clothes-press C., is lighted by one window, and has a door opening into the kitchen. The kitchen is entered from without, either through the back veranda, or the wood-house, and is lighted by two windows looking out through the veranda. *A.* is the chamber stairway—*B.* the cellar do.—*D.* ash-bin—*E.* outside cellar stairs—*F.* large door for throwing in wood—*O.* cistern-pump, and platform. The dotted line in the wood-house represents the wall of the cistern.

On the second floor, fig. 48, *A.* is the principal stairway—*B.* bed-rooms—*C.* closets—*D.* is either a bed-room or lumber-room—*H. H.* halls—*O.* kitchen stairs—*G.* garret stairs.

It will be seen by the perspective view above given, that the house is intended to be built in the *bracketed* style. I adopted this style in preference to the rural gothic, not because I consider it more beautiful, but because it is less likely to be carricatured by ignorant mechanics, or fashionably ambitious imitators. There is now such a passion for gothic dwellings, that the country will soon be blotched with all kinds of gabled and rustic fantastics, and the style will be burlesqued to such an extravagant degree as to become odious. When displayed *in proper situations in the country*, the picturesque beauties of rural gothic dwellings are unrivalled. But to see such dwellings put on town lots, or in flat, bare fields, inspires the same aversion as would a bald

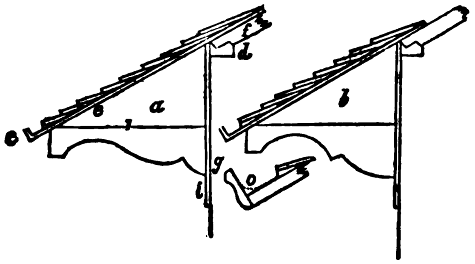


Second Floor.—Fig. 48.

"three story brick," situated in a quiet and picturesque valley.

I prefer the bracketed style to the common modifications of Grecian styles, for its greater availability for domestic uses, and because it is less common.

In the construction of this house, the roof of the main part should extend over the walls about three feet, and the roof of the rear two feet. This, more than any other feature, will give the house a sheltered, comfortable, *home* expression. Such a projection must be supported by brackets. These may be made of almost any form to suit the fancy of the builder. Fig. 49 represents sections of the roof projection, supported by two simple forms of brackets. *a.* is a neat and common form; *b.* is less common, but very pretty. In the cut, *g.* represents the side of the house—*i.* frieze—*e.* roof-boards and shingles—*c.* eave trough—*d.* plate—*f.* rafter. The part below the dotted line represents the brackets as displayed at the gables. The brackets should be cut out of two, or two and a half inch plank. The frieze should be of thick stuff, put on in the usual way. To this the bracket must be firmly nailed or mortised. The roof-boards to be nailed on to the brackets must be smoothed on the under side and nicely jointed. The eave-trough is made by nailing a board at right angles to the board that projects over the bracket, as at *o*, and lining it with tin. In order that the roof may not come down too far over the upper windows, it will be necessary to make the top of the plate about two feet or eighteen inches above the floor of the garret, which will make the posts of the house about 22 feet long.



Projection of Roof.—Fig. 49.

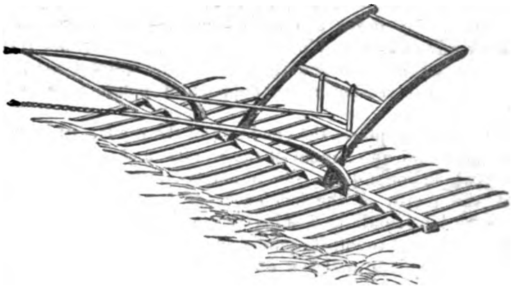
It will be seen that there is but one chimney, and no fire-place in the main house. Stoves, in consequence of being more economical of fuel, and giving a more even heat, are now pretty generally preferred to fire places. There being no fire-places there will be no need of mantels, which, with fire-places and extra chimneys, are quite an item of expense. If a shelf is wanted for a clock, a short one can be put up where needed, supported by neatly carved brackets—opposite the bay window in the sitting-room would be an appropriate and convenient place.

The cellar can be made under the whole house, or merely under the kitchen part.

Estimate.—I am not able to make a very close estimate of the cost of this house, if neatly finished throughout; but from the opinions I have gathered from builders, I think it cannot be built as it should be for less than $1,800. This is supposing that the proprietor bestows no labor upon it himself.

F. J. Scott.

Toledo, Ohio, May 10, 1847.



THE REVOLVING HORSE RAKE.

This implement, well known in many parts of the country, and in use for many years, holds nearly the same relation to the common hand-rake, in saving labor, as the plow and cultivator bear to the hand-hoe. A large portion of our farmers have not yet availed themselves of its eminent advantages. The amount of work it will perform with a single horse and driver may be easily estimated by any one, when it is stated that a strip of hay on the ground, ten feet wide, may be raked up into winrows as fast as the horse will walk; that is, if the horse travels three miles per hour, more than three acres will be raked in that time, or twenty-four acres per day. The only labor in unloading each rakeful of hay, is a slight lifting of the handles, which causes the teeth to make a semi-revolution, and drop the load, without stopping. It is not merely the saving of labor at the moment, that gives this rake all its value;—the rapidity with which a large field of hay may be secured from a threatening storm, in case of emergency, is often of the greatest value.

The teeth of this rake lie flat on the ground during its operation, and not, as has been represented in most of our agricultural papers, running on their points.

Profitable Hens.—J. W. Bissel, of Rochester, who keeps his hens in a warm, dry, clean, and light hen-house, and feeds them in winter with mill screenings, butchers' scraps, and sometimes with warm boiled potatoes and cabbages, finds them to lay the greatest number of eggs in 2d mo., (Feb.,) when they sell highest in market. "The greatest number laid in any one day during that month, was 27, worth 42 cents; the averaged price of their food each day was 7 cents." The cost of attendance is not stated.

MANAGEMENT OF ROADS.

[THE common system of managing the repairs of roads, is by each individual giving a certain number of days' work on the highway, to balance a certain number of dollars assessed against him—giving to each person taxed the offer of commutation at a given rate. The work is generally conducted by supervisors, surveyors, or overseers, who are annually chosen by the different towns or townships. It is thought by many that this is not the best mode of supporting the repairs of roads, and a different one has been in some instances adopted, in lieu of it. Instead of personal service being rendered, the tax is paid in money, which is expended under the direction of agents chosen for the purpose. So far as this system has been tried, we believe it is generally acknowledged to be far better than the old custom. Mr. GILLESPIE, in his work on "ROAD MAKING," which we noticed last month, has an interesting chapter on this subject. He points out, in the first place, the defects of the present system, and then proceeds to lay down a plan which appears to possess many advantages. We recommend a portion of his remarks, which are herewith given, to the careful attention of all interested in the support of public roads.—EDS.]

In the first place, the condition of the roads, which is so important an element of the wealth and comfort of the whole community, should not be allowed to remain at the mercy of the indolence, or false economy, of the various small townships through which the roads pass. In one town, its public spirit, wealth, and pride, may induce it to make a good road; in the adjoining town, a short-sighted policy, looking only to private interest in its narrowest sense, may have led the inhabitants to work upon the roads barely enough to put them into such a condition as will allow a wagon to be slowly drawn over them.

In the next place, the "commissioners" who have the primitive direction of the improvements and repairs, should be liberally compensated for the time and attention which they give to the work. Gratuitous services are seldom efficient; at best they are temporary and local, and dependent on the whims, continued residence, and life of the party; and if the compensation be insufficient, the same evils exist, though in a less degree. Skill, labor, and time, cannot be obtained and secured without being adequately paid for.

The third defect in the system is the annual election of the commissioners and overseers. When men of suitable ability, knowledge, and experience have been once obtained, they should be permanently continued in office. On the present system of annual rotation, as soon as the overseer has learned something in his year's apprenticeship, his experience is lost, and another takes his place, and begins in his turn to take lessons in repairing roads at the expense of their condition. In other occupations, an apprenticeship of some years is thought necessary before a person is considered as qualified to practice with his own capital; while a road overseer, the moment that he is chosen, is thought fit to direct a work requiring much science, at the expense of the town's capital of time, labor, and money.

In the fourth place, the *fundamental principle* of the road-tax is a false one. Its contemporary custom of requiring rents to be paid in kind, has long since been found to be less easy and equitable than money rents. Just so is work paid for by the piece preferable in every respect to compulsory labor by the day. Men are now taken from their peculiar occupations, in which they are skilful, and transferred to one of which they know nothing. A good plowman does not think himself necessarily competent to forge the coulter of his plow, or to put together its woodwork. He knows that it is truer economy for him to pay a mechanic for his services. But the laws assume him to be a skilful road-maker—a more difficult art than plow-making—and compel him to act as one; though his clumsiness in repairing his plow would injure only himself, while his road-blunders are injurious to the whole community. Skill in any art is only to be acquired by practical and successful experience, aided by the instructions of those who already possess it. An artisan cannot be extemporized.

Fifthly, labor by the day is always less profitable than that done by the piece, in which each man's skill and industry receive proportionate rewards. Working on the roads is generally made a half holiday by those who assemble at the summons of the overseer. Few of the men or horses do half a day's work, the remainder of their time being lost in idleness, and perhaps half of even the actual working time being wasted by its misdirection.

Lastly, it follows from the preceding, that the commutation system operates very unfairly and severely upon those who commute; for they pay the price of a full day's work, and their tax is therefore doubled.

Such are the principal defects of the present system of managing the labor expended on town roads. But it is much easier to discover and to expose, than to remove them. In the following plan the writer has endeavored to combine the most valuable features of the various European systems, and to adapt them to our peculiar institutions.

In each state, a general legislative act should establish all the details of construction, and determine definitely "What a road ought to be," in accordance with the theory and practice of the best engineers. Surveys should be made of all the leading roads, and plans and profiles of them prepared, so that it might be at once seen in what way their lines could be most efficiently and cheaply improved.

The personal labor and commutation system should be entirely abolished. If the town-meeting would vote a tax in money of *half* the amount now levied in days' work, its expenditure under the supervision to be presently described, would produce a result superior to the present one. When a road is a great thoroughfare, extending far beyond the town, it would be unjust to levy upon it all the expense; and a county tax, or in extreme cases, a state appropriation, should supply what might be necessary.

In regulating the expenditure of the money raised, the fundamental principle, dictated by the truest and most far-sighted economy, should be *to sacrifice a portion of the resources of the road to ensure the good employment of the remainder*. The justice of this principle needs no argument; its best mode of application is the only difficulty. The first step should be to place the repairs of the roads under the charge of a professional road-maker, of science and experience. On his skill will depend the condition of the roads, more than on local circumstances or expenditures. His qualifications should be tested by a competent board of examiners, if he should not have received special instructions in the requisite knowledge, such as might well form a peculiar department of education in our colleges and normal schools. As each town by itself could not afford to employ a competent person, a number of them (more or less, according to their wealth and the importance of the roads within their bounds,) should unite in an association for that purpose.

The engineer thus appointed, should choose, in each township, an active, industrious man, of ordinary education, to act as his deputy in making the expenditures in that town, and as foreman of the laborers employed during the season of active labor on the roads. This deputy might be busily and profitably employed during the entire remainder of the year, in constantly passing over in due rotation the whole line of road under his care, and making, himself, the slight repairs which the continual wear and tear of the travel would render necessary. If taken in time, he himself could perform them; but if left unattended to, *as is usual*, till the season of general repairs, the deterioration would increase in a geometrical ratio, and perhaps cause an accident to a traveller, which would subject the town to damages tenfold the cost of repairs.

The laborers hired by the deputy in each town should be employed by piece work as far as is possible. This can be carried out to a great extent, when the superintendent is competent to measure accurately the various descriptions of work, and to estimate their comparative difficulty. When the work cannot be properly executed by portions allotted to one man, it may be taken by gangs of four or five, who should form their own associations, make a common bargain, and divide the pay. In work not susceptible of definite calculation as to quantity or quality, and in such only, day-labor may be resorted to under a continual and vigilant superintendence.

In such a system as has been here sketched, the money tax would be found to be not only more equitable than the personal labor system, but even less burdensome. None of it would be wasted; and those who had skill and strength for road work would receive back, in wages, more than their share of it; those who were skilful in other work might remain at that which was most profitable to them, and pay only their simple share of the road-tax, not double, as when they now commute; and the only losers by the change would be the indolent, who were useless under the old system, but under this, would be obliged to contribute their share; while great gain in every way would ensue to the community at large. The subject urgently demands legislative attention.

CUTTING GRASS FOR HAY.

The stage at which it is proper to cut grass for hay, undoubtedly varies with the different species. Some kinds, as the orchard grass, (*Dactylis glomerata*.) and the common "spire grass," or Kentucky blue grass, (*Poa pratensis*,) make only a small weight, comparatively, in culms or seed stalks, but in favorable soils throw up an abundance of long, rich leaves. Where a heavy growth of such grasses is produced, it is best to mow them twice or more in a season—the first time when they are in flower, (or sooner if they lodge down,) and at such times afterwards as they will afford a suitable burden. But if the land is not rich, there will be only a few seed-stalks, and it may in many cases be better to let them die and dry up, and permit the growth of the leaves to continue till the latter part of the season, or till a good crop is accumulated. It should be remembered however, that in all cases where there is a thick growth which lodges or falls down, it should at once be cut; otherwise the grass will spoil by fermentation, and the roots, also, will be more or less killed.

It is probable that timothy, the herds-grass of New England, (*Phleum pratense*,) attains its maximum amount of nutriment at a later stage than most of the grasses commonly cultivated here. The common opinion is that its greatest value is at the time, or after, its seed is ripe. Our experience does not support this idea. We are aware that according to the experiments of Sinclair, as given in the *Hortus Gramineus Woburnensis*, the ripe stems of this grass afforded twice the amount of nutriment given by the same quantity taken in the flowering stage. This statement has probably had great influence in the minds of farmers in regard to the subject. But further researches in chemistry, have shown that the experiments of Sinclair are not to be relied on for accuracy. His process was described in the work just referred to, page 2, as follows:

"The grass, in a green or dry state, is submitted to the action of hot water till all its soluble parts are taken up. The liquor is then separated from the woody fibre by means of blotting paper; it is then evaporated to dryness. The product, or solid matter, is the nutritive matter of the grass."

In relation to the experiments of Sinclair, Prof. Johnston, in his lectures, remarks that they have lost much of their value since it has been satisfactorily ascertained—

"1. That the proportion of soluble matter yielded by any species of grass, when made into hay, varies not only with the age of the grass when cut, but with the soil, the climate, the season, the rapidity of growth, the variety of seed sown, and with many other circumstances which are susceptible of constant variation.

"2. That the animals have the power of digesting a greater or less portion of their food which is insoluble in water. Even the woody fibre of the hay is not entirely useless as an article of nourishment—experiment having shown that the manure often contains less of this insoluble matter than was present in the food consumed.

"3. That some of the substances which are of the greatest importance in the nutrition of animals—such as vegetable fibrin, albumen, casein, and legumin—are either wholly insoluble in water, or are more or less perfectly coagulated and rendered insoluble by boiling water. Mr. Sinclair, therefore, must have left behind, among the insoluble parts of his hay, the greater proportion of these important substances. Hence the nature and weight of the dry extracts he obtained could not fairly represent either the kind or quantity of the nutritive matters which the hay was likely to yield when introduced into the stomach of an animal."

It is evident that even Mr. Sinclair himself was by no means confident as to the correctness of his deductions, for in relation to the soluble matter of the grasses being taken as denoting accurately their value, he quotes from Sir Humphrey Davy, as follows:—"But still these quantities [of soluble matter,] cannot be regarded as *absolutely* denoting their value; albuminous or glutinous matters have the characters of animal substances: sugar is more nourishing and extractive less nourishing than than any other principle composed of carbon, hydrogen, and oxygen; certain combinations of these substances, likewise, may be more nourishing than others."

Upon the whole, therefore, though we should be in favor of allowing timothy to come nearer to maturity than most other kinds of grass, we would cut it for hay before much of its seed is ripened.

The stems of timothy, where the growth is rank, are generally stiff and coarse, and the hay is frequently too hard and wiry to be greatly relished by cattle. To obviate this objection, it is well to give the hay a good *sweating* in cock. Soon after the grass is cut, or when it is fairly wilted, and the external moisture dried off, put it into cocks which will make from fifty to sixty pounds, (dry hay,) and let it remain in that situation for twenty-four to forty-eight hours. Then shake the hay out lightly, in a drying day, and it will be found much more soft and more agreeable to stock than if made in any other way. Time is also gained in the making in this way,—the hay drying much more rapidly after it has been sweated. Where it is intended to be pressed and baled, or exported, the practice of drying it in swath may do, provided the grass is not cut till it has become quite ripe; but the hay will be harsh and not as good, especially for sheep and cattle, as that made in the mode above described.

FIXING AMMONIA.

MESSRS. EDITORS—Your correspondent, T. H., of Colchester, Canada West, and yourselves, invite remarks upon the above subject, in your last number. If you please, you may insert the following from a "*chemical friend*" who takes and reads the "Cultivator," although not a practical farmer.

First, as to *facts* in the case. Gypsum, or sulphate of lime, is not a super-salt, or rather, there is no super-sulphate of lime, as supposed by T. H. Gypsum is composed of one equivalent of sulphuric acid, and one of lime, and two equivalents of water, (i. e.) the common gypsum used for agricultural purposes. Gypsum and carbonate of ammonia when brought in contact, at common temperatures, will mutually decompose each other, and the resulting compounds will be sulphate of ammonia and carbonate of lime. The ammonia in *rain water* is in the form of a *carbonate*, and gypsum "*fixes*" the ammonia by the two compounds mutually decomposing each other, and converting the ammonia into a sulphate, which is a *fixed salt*, thus rendering it useful to vegetation. The difficulty with T. H. seems to be that he does not reconcile this with his table of affinities. The difficulty in the matter seems to lead T. H. to doubt THE FACTS. Now, no ABSOLUTE reliance can be placed upon tables of affinities, in *all cases*, as was once supposed by Geoffroy and others. There are so many *disturbing extraneous causes*, that the *exceptions* in many cases would form the *general rule*. Among these disturbing causes, we may mention heat, light, electricity, and cohesion or density—all tending to disturb our tables of affinities, so that should we place too much reliance upon them, they might lead us to contradictory and erroneous conclusions. "Sulphuric acid has a stronger affinity for lime," says T. H., "than for ammonia." It is true that the affinity between the *elements* of gypsum is greater than between the elements of sulphate of ammonia; but it is not true, as T. H. says is "evident to his mind," that carbonate of lime and sulphate of ammonia will, when mixed together, mutually decompose each other. No chemical action takes place under the circumstances supposed. An experiment that will prove two things, may be tried in the following manner: Add to two quarts of pure rain water, in a chinaware dish, about a tea spoonful of sulphuric acid, then evaporate nearly to dryness, then add a little pulverized lime, and you will readily perceive the *peculiar* smell of ammonia. Now this proves, that there is ammonia in rain water, and that lime will decompose the sulphate of ammonia, forming sulphate of lime; *but mind*, there is no carbonic acid present. That escaped in the form of a gas when the sulphuric acid was added to the rain water. If *carbonic acid* had been present, it would have prevented the chemical change. Now, neither carbonic acid or ammonia *alone*, will decompose gypsum or sulphate of lime; but when the two are together, which is always the case in rain water, stables, &c., where ammonia is sensibly present, from the decomposition of animal matters, a mutual decomposition takes place. The "apparent discrepancy," if any, may be explained in the following manner, by what, in the books, is called "*double elective affinity.*" But I will explain it, I think, so that all your readers will readily understand it. Let the force or affinity by which the elements of gypsum (sulphuric acid and lime,) are held together, be called "quiescent" affinity, and (for illustration,) be represented by 20. Again. Let the force or "quiescent" affinity between the elements of carbonate of ammonia be represented by 5. Now bring the two compounds together, and a new set of affinities is brought into action, viz: between the sulphuric acid and ammonia, and between the carbonic acid and lime. These new affinities are called "divellant," and are greater than the "quiescent" affinities, in the case in question. We will suppose, for illustration, the affinity between the sulphuric acid and ammonia, to be 15; and between carbonic acid and lime, 15 also; the result would be as follows:

Quiescent Affinities.

Sulphate of lime,...... 20 } equalling 25.
Carbonate of ammonia, 5 }

Divellant Affinities.

Sulphate of ammonia, 15 } equalling 30.
Carbonate of lime, .. 15 }

Now you perceive that the *sum* of the "divellant" affinities is greater than the *sum* of the "quiescent" affinities; and hence the change. But you take carbonic acid out of the question, which T. H. does not take into account, and you abstract a force or power in the supposed case, equal to 15, which in the *case in question exists* between the carbonic acid and lime, tending *directly* to separate the lime from the sulphuric acid. Thus you perceive, that the table of affinities of T. H. is *no guide* any farther than "*single elective affinity*" is concerned, which takes place in the case in question, when carbonic acid is *absent*. I think this will be sufficient to explain the *modus operandi* in the *change* in question.

Now, Messrs. Editors, the *fact* that gypsum will fix the ammonia that descends with the gentle dew and rain from heaven, and thereby render greater facilities for vegetation to acquire the indispensable principle nitrogen, is a wonderful and most valuable discovery in these days of progress; far more useful, perhaps, to the human family, than the fabled waters of *Lethe*, or its more *modern reality*, which sooths the system into quiet and repose, and renders it insensible to the surgeon's knife. It is no doubt a great boon to mankind to be relieved from the consciousness of pain while undergoing the severe ordeal of surgical operations. Yet the pains and horrors of *starvation*, which can neither be removed or alleviated by any fabled or real Letheon, but *demand* *bread! bread!* with an eloquence and earnestness that fiends themselves could not deny, were it in their power to give, is far more terrible than the surgeon's knife when experienced in all its reality. This *modern* discovery of the effects of gypsum in fixing ammonia, is to the human race what "Letheon" is to the afflicted. They must both be properly used, and the results are alike most wonderful and valuable.

By direct experiments, it is found that 4 lbs. of rain water, contain one grain of ammonia. Now, take the four months of April, May, June, and July, and according to experiments made by Schubler, there would fall, ordinarily upon one acre, about 60,540 tons of rain water. This would give us ammonia enough, could it all be made fixed in the soil, to yield about 45 lbs. of nitrogen, which is as much as is contained in 2¼ tons of hay, but not as much as would be contained in the straw, seed, and roots of some kinds of grain that *might* be raised on an acre, though *more* than would be necessary for what is often produced. Hence the reason why gypsum is more valuable for grass when used alone, than for grain. Soils, abundant in all the alkalies necessary for the vigorous growth of grain, would need more nitrogen than is contained in the ammonia of rain water. Chemistry points to the liquid excrements of animals as the most ready means to supply it. From the fermentation and decomposition of these substances, carbonate of ammonia is generated, and the ammonia should be fixed to the soil by all the means within our power; the readiest of which, perhaps, are gypsum and charcoal. The office of charcoal is two fold. Firstly, by supplying carbon to plants, in the carbonic acid absorbed from the atmosphere, and secondly, by condensing ammoniacal gas within its pores, which is easily separated by plants and appropriated to their use when the ground is moist. Decayed wood is nearly like charcoal; hence the value of decaying woody fibre, in the shape of what is called *humus*, peat, &c., though peat contains decaying animal matters in conjunction with woody fibre, and thus is more valuable still as a fertilizer to many soils.

There has much been said as to the effects of gypsum upon soils, when used for a series of years in succession, as to a tendency to exhaust them. How gypsum *may do good*, I have shown above. I may, at some future time, say more upon gypsum, and some other things, if the pages of the Cultivator should be no more profitably employed. SPALDING.

Rouse's Point, N. Y., April 6, 1847.

[A communication on the above subject, received subsequently to the foregoing, will be given next month EDS.]

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

LETTERS FROM PROF. NORTON.

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Utrecht, Netherlands, May 15, 1847.

MESSRS. EDITORS—Since my last, everything in the vegetable world has been almost without change until the last week or ten days, during which the weather has been warm and springlike. The development of vegetation within this period has been extremely rapid, more like that of a colder climate, than is usual here.

The various grain crops are coming forward rapidly, and we are now better able to judge of the prospect for the ensuing harvest. The autumn sown grain seems generally in this, and I am informed over other large districts, to have suffered from the winter, the crowns of the ridges being sometimes almost entirely bare. The color, however, is green and healthy. The spring sown grain almost universally appears extremely flourishing.

I have been much pleased in the course of a walk today, with the appearance of the pastures; they present a deep living green, and a closeness of herbage that I have rarely seen equalled. It is only, however, within the last two weeks that they have been in a condition to save the remainder of the farmers' hay ricks. The cows are now in the spring, turned into their pastures without the *jackets* in which they were universally clothed during the autumn. I got a look into a dairy farmer's cow stable a few days since. The cows all stood with their heads inward, and a passage behind. There seemed to be no manger, in fact nothing in front but upright sticks, curved a little in the middle, so that the animal could pass its head between them and eat from the ground. They were placed almost as closely together as they could stand. The barns are generally of brick, with low walls and high steep thatched roofs. The houses on the exterior are of much the same model, but smaller in size, and the two are frequently in closer contact than would please our farmers.

It is considered here a distinguished mark, or rather presage of good fortune, if a pair of storks choose to locate themselves on the chimney of a person's house. These singular birds almost always build upon the tops of chimneys. I saw one chimney upon which an old cart wheel had been placed, both for the convenience of a pair of these birds of good omen, and in order that the draught of the chimney might not be stopped. Upon this cart wheel they had collected an immense mass of sticks and grass, certainly a foot in thickness.

Much trouble is taken to collect manure, and materials for forming composts; the ditches are carefully cleaned in spring and autumn, and large quantities of excellent materials for the latter purpose obtained. But by a singular inconsistency, these heaps, gathered by so much toil, are frequently placed upon the very borders of ditches, where the liquid drains away. I saw this morning a beautifully made heap of manure, 30 or 40 loads, arranged on a flagged slope, leading from the back of a barn down to a ditch of about six feet wide, filled with water in which was a slow current; this water was colored almost black by the drainings of the heap, thus conveying away certainly a fourth part, if not a third, of its value.

The small cross roads here are as bad as our own, being almost impassable in spring. In Friesland, where the soil is clay, all of the travelling at this season is done on the canals.

I have been favored to-day with a sight of 15 or 20 of the swinish tenants of the Dutch farm-yards. I do not pretend to much learning in this branch of knowledge, but I instantly recognized a likeness, which I think I have seen in your paper, of an animal usually called a hog, but which your correspondent insisted upon naming a *landpike*. They were all legs, and head, and ears, and tail, and hair. The back approached a semicircle, with a row of bristles like the back fin of a roach or perch; the lower line of the body followed in some degree the line of the back, being somewhat contracted in the middle; the hams and shoulders were merely slightly enlarged continuations of the lower portions of the legs. The idea of *fat*, in connection with such animals, seemed quite preposterous. I have heard several Dutchmen say that they considered pork as an inferior kind of meat, and am no longer disposed to wonder at their prejudice, especially if they have ever had their attention drawn to one of these creatures while living. Yours truly, John P. Norton.

NOTES OF A TRAVELLER IN ENGLAND.--No. 5.

Draining—Irrigation.—In the advancement of agriculture in England, draining bears a most important part. It is now being adopted in all well cultivated districts, and the beneficial effects are everywhere apparent. It is not improbable that the excessive moisture of the climate in England, requires more thorough draining of the land, to remove the excess, than with us. The drains most frequently used in English husbandry, are blind, or covered, so that there is no loss in the cultivation of the land. From a careful inquiry as to the beneficial results of systematic draining, I am satisfied that in very many instances, the product of the land has been more than doubled, and its value increased in like proportion.

The depth and width of the drains must of necessity vary, as the nature of the soil, the quantity of water to be removed, and the descent which may be obtained in the drains, may render necessary. I should judge from what observation I was enabled to make, that from thirty inches to four feet was the usual depth, though in many instances a much deeper drain is used. Prof. Johnston recommends that drains should be at least three feet in depth, and his recommendation meets with much favor. Draining tiles are generally preferred, and they are at present probably the cheapest article that can be had for the construction of permanent drains in most parts of the kingdom. Considerable care is necessary in covering them. It is said, and I doubt not truly, that the number of acres of land heretofore worthless, which have been rendered valuable and productive by means of systematic and thorough draining, now amounts to many millions of acres. Much, however, yet remains to be done, before the entire country will be brought under such a complete system as will enable the farmer to realize from his land all that good husbandry in this respect would give him.

The actual decrease of moisture in well drained portions of the kingdom, has been satisfactorily established. The health of those districts where thorough draining has been resorted to, has been obviously improved. This is so apparent, that those engaged in the inquiry as to the causes of the surprising mortality which still exists in some sections of the country, have made careful examinations as to the results on health, and have given it as their opinion that the mortality in these districts has been diminished more than one-third. The subject in this point of view is attracting much attention, and it will doubtless be urged upon the public until a thorough system is adopted throughout the entire kingdom.

In Ireland it is far more needed than in England, much less having been done. The government are at present turning their attention to this and other means of improvement, and unless the landholders become wise to their own best interests and adopt improvements themselves, it is not improbable that parliament will be compelled, in order to save the millions of the laboring population of Ireland from absolute starvation, to force the landholders to enter into these measures. That Ireland can support her own population, if proper means are adopted in the cultivation of the soil, no person who has visited that fertile isle can for a moment doubt.

That great improvement may be made in lands in this country by thorough draining, is apparent from the success which has attended what has already been done. Many of our farmers are turning their attention to it, and wherever an Englishman or a Scotchman settles, an example is given in this respect which our countrymen are prone to imitate. Was this much more common than it is, the productions of the land and a greater certainty of a crop, would satisfy every farmer, that much might be learned in this matter, to our advantage, by following a practice which has proved of such immense advantage across the water.

Irrigation is practiced to a considerable extent, and when judiciously conducted, with most surprising results. In many sections of the country, every little stream is used to advantage. Dams are erected, and slight ditches, so as to water the whole surface, are cut through the fields, and the land is flooded as occasion requires. The increased product is in many cases very great. The grass land is mostly benefitted, but on some grain crops I saw it used to advantage, though great care is required, lest the crop should be injured by an excess of water. In the neighborhood of some of the large towns, where the streams receive the wash of the sewers, I have observed a remarkable fertility in the meadows and grass lands.

The agriculture of England never could have attained its present state of improvement, had not attention been given to the adoption of every available means to enrich their lands, and thus secure a bountiful return in the crops. There are, it is true, many portions of the country, where these and other improvements have not been fully carried out,—but those portions are constantly lessening in extent, and the time is not far distant, when they will in a great measure be only known in the recollection of the past.

If this practice is thus useful in the moist climate of England, how much more advantageous would it prove with us, when our lands are so often parched by the burning heat of summer, which is rarely known there Irrigation and draining should go together, as there is danger frequently of a surplus of water, and the drains will take off what is more than sufficient for the healthful growth of the grain or plants.

It has been often said to me by gentlemen, that the methods of English husbandry cannot be adopted here. I am aware that there are some practices there that cannot be made to apply here, nor be suddenly introduced; it is necessary to proceed with caution—but it will be of immense advantage to our farming interests, if attention is given to practices which have been successfully adopted elsewhere. In this way we may learn from the experience of others, select those methods which are suited to our climate and our circumstances; and thus, without loss of time, we may avail ourselves of their experience, which has cost years of labor and vast expenditure of means. Draining and irrigation may be adopted wherever necessary, and without such an expenditure as to render them burdensome. The increase of crop, the advantage to health, and the reclaiming of land now unproductive in many cases, would lead to results most beneficial to the agricultural interests of this country. H.

RURAL NOTICES ABROAD—No. VI.—By Caius.

Lombardy.—The most striking rural feature of Lombardy, is the festooning of the vines from tree to tree along the way. The country is flat, and exceedingly productive, and reminded me frequently of the richest portions of the meadows along the Connecticut river. The roads are broad and kept in excellent condition; on each side, through all the rice growing portions of the country, are large ditches, from which the water is drawn off as needed, for the rice fields beyond them. Just across these canals, are lines of trees running for miles parallel with the road, and through a large part of the kingdom, absolutely burthened with vines.

The water of the canals is also used for irrigation of their grasses, and even of corn land. Indeed, I do not remember a district where irrigation appeared to be conducted on so grand and so scientific a scale as in Austrian Lombardy. The first engineers are employed,—and that they have good ones, the excellence of the roads is sufficient proof—and the privilege of using the waters is let out by contract. The closest watch is kept of all the sluice ways, and water is sold by inches.

Grass fields cut, not unfrequently, three heavy crops in a season. And even two crops of the lighter grains have been matured. The corn (maize,) is most abundant in its produce—cultivated almost uniformly in lines; and its tillage not differing much from that practised in our own country, except that it is far more thorough.

The peasantry of Austrian Lombardy have by no means the contented look of those of Tuscany; still they are in general well clad, and healthy looking. They are rarely the owners of the lands they improve; though families frequently occupy the same farm from generation to generation. The implements are not so perfect as in Tuscany; nor is the same encouragement given to new methods, or improved means of pursuing field labor. The oxen are exceedingly fine, and great care is taken of them; you not unfrequently see them in the field blanketed, to protect them from the flies and the rain. The yokes are beautifully made, and fitted for easy draft.

The barns through all of Lombardy are huge—set up upon pillars of stone, and laborers live under the same roof with their cattle.

Between the Austrian dominions and Tuscany, stretches a pile of the Appenines, and just under its nearer side, a limit of the Papal territory; in this lies the old city of Bologna.

Bologna.—In its neighborhood cultivation offers a striking contrast to that of the more southern Papal lands. All is as rich as a garden. The vegetables in the markets are hardly surpassed in Belgium. Hedges, too, are neatly trimmed; and it is with feelings of gladness, that one, after toiling over the mountains south of the city, leaves the sight of their ugly fissures, and barren, heathy sides, for a look out upon the sweet lap of valley in which lies Bologna. As you ride down towards it, hedges take the place of broken and homely walls; locust trees in blossom perfume the air,—the clover carpets acres with its crimson tufts, waving over the sides of the hills like silken plush; sweet briar, and flowers of every hue, are on each side of you, and plum trees, and cherries, are in the promise of bearing; while on the plain land below, in a great prairie of checkered grain, and grass, and orchard,—running away flat and broad as a sea, to the distant horizon,—are the roofs and leaning towers of the city.

Indeed, in all that regards progress, whether in agriculture or commerce, the Bolognese are far before the other subjects of the Pope. And this it was that made them the most restive and revolutionary of all, under the tyranny of the old sovereign.

Coming down upon the plain, where lie the little governments of Parma and Modena, you see great fields of hemp and flax, the former of gigantic growth; and in the cottages you see the peasantry spinning.

A penny a day is the average earning of the flax spinners. No wonder they want to come to America.

Mulberries appear occasionally. Elms and poplars are the prevailing trees in the flat land.

The Bologna sausage is famous over Europe; but its peculiarity is merely in the making. Indeed, it is now successfully imitated in most other continental cities, as well as to some extent I believe, in our own. The swine I observed in Italy—out of Naples—were mostly of inferior description.

I have thus given running glimpses of the rural appearances of Italy—purposely brief and without detail, since little is to be learned by us in way of improvement, from study of Italian agriculture. There are, however, some things in their systems, by attentive observation of which, we should be gainers.

First—in respect of irrigation. No where in Europe is the proof of its good effect so apparent as in Lombardy; no where is it conducted with more care; no where does it so richly repay the outlay. Nor is the general surface more favorable to the system than in many parts of our own country.

Second—in care of cattle. The oxen and cows of Tuscany and Lombardy are more sleek and beautiful in their appearance, than any I remember to have seen elsewhere. This is owing to nice preservation of breed,—to proper and full feeding, and to regular and judicious cleaning, and protection from the weather. I may add further, that their docility and strength were equal to their good appearance.

Third—in economy of ground. The lines between fields are almost uniformly set with trees in some way productive—either as supports to vines, or furnishing food for silk-worms. Their grain fields serve in some measure as orchards; and the practice of soiling is the fullest possible proof of best land economy.

Fourth—in substantial nature of their buildings. They are of lasting materials—well constructed—ample in size—nor are they without those graces of neatness and beauty to which some American farmer are as insensible as brutes.

Fifth—in multiplication of products. If the silk crop fail, he has his grain, or his wine, or his orcharding. Thus too, he tests and brings into exercise every quality of his soil.

Sixth—his cheerful labor. He sings among his vines, and they make a chorus together at the reaping. In his cottage, and on the mountain, he wears a contented and a courteous look. May not the American farmer, with twice the success of the poor Italian, and as rich a country, study with benefit, to wear a like air of contentment—at least out of courtesy to those with whom he comes in contact;—if not with the higher intent of making it—as it were—an every-day thanksgiving to Him, "*who turneth rivers into a wilderness, and the water-springs into dry ground?*"

In my next paper I shall speak of some other portion of the continent.

Preserving Eggs.—This is the season to put up a store of eggs, against "time and need." There are various modes of preserving them. Lime-water has been found to answer well. Mr. H. A. Parsons, of Buffalo, informs us that he has been successful in preserving them with salt. He takes large stone jars, or tight kegs, and packs the eggs *on the small end*, first putting in a layer of salt, and then a layer of eggs, taking care that the eggs do not touch the keg or jar. In this way the vessel is filled to near the top, when it is carefully covered over and placed in a cool dark place. Mr. P. has kept them in this way, perfectly good for three years. It is important that the eggs should be new, not more than ten days old, when put up, if it is intended to keep them a great while.

Curing Hams.—The editor of the Farmers' Cabinet says that his mode—the best he has fallen upon in a practice of 30 years—is to wrap the hams completely in newspapers, and then enclose each in a muslin bag, drawing the mouth of the bag closely about the string which is attached to the ham and by which it is suspended. A correspondent of the Ohio Cultivator never finds any care necessary in excluding flies, when a teaspoonful of red pepper has been rubbed upon the fleshy part of each ham before salting.

THE ORCHARD AND THE GARDEN.

Manuring Pear Trees.—I notice in the March number of the Cultivator, a short article on transplanting fruit trees, by Mr. **Worden**, in which he recommends manuring the ground highly for them, and speaks of producing a growth of 8 feet in a season, on a pear graft, by the use of hog manure. This manuring ground highly for fruit trees, may do well at the east, *with some kinds*, as, for instance the apple, but for the pear, I do not believe such a system is safe at all. At least it would be utterly ruinous here at the west with the pear tree, and more or less hurtful with all kinds of fruit trees on a large proportion of our soil. It is well known that the pear tree is liable to a disease called the frozen sap-blight, which I have heard has almost destroyed many of the finest pear orchards at the west. and as I learn from various sources, is becoming somewhat prevalent at the east. Those who are best acquainted with this disease, believe it to be caused by a rapid and unripe, or a very late growth, which utterly unfits the trees for withstanding our severe winters. Nothing could be more likely to produce such a growth than to excite the roots by manuring them so highly, and hence I view it to be very unsafe; although under favorable circumstances they might escape. A thorough cultivation of the soil, aided, if necessary, with some weaker, less stimulating manure, I should much prefer. The thorough cultivation alone, is a great plenty here. So far as I have seen, the poorest soils of our prairies and openings, are the most favorable to the health and productiveness of the pear tree. The great desideratum, the "*ne plus ultra*," in growing pear trees, (and indeed, every kind of fruit tree,) is to have a *firm, well-ripened tissue*, which alone will insure them against injury in our trying winters. I should much rather have a firm, sound growth of two feet in a season, than a forced, unripe growth of eight feet. In regard to the west, I speak as having had some little experience here; of the east I know less to be sure; but if I am wrong in thus advising in regard to pear trees there, will Mr. **Thomas**, or some other experienced horticulturist, set me right. But if I am *right*, will our friends remember this, if they wish to raise pear trees.

Budding.—I do not agree with Mr. **Smith**, in the March number, in regard to budding. He recommends stripping off the leaves before inserting the bud, and after it has started, to cut off the top. As to stripping off the leaves, it seems to me to be not only perfectly unnecessary, but very injurious to the trees. Nor would it be so very easy to prepare a lot of several hundred or thousand trees in this way, as in a nursery, for instance. I am sure I should seriously object to having caterpillars do it for me, even if they were inclined to, about the right time, and quite as much on account of losing the leaves as anything else. The tree, if thus stripped, would of course lose the leaves already formed, and that at a time when its main strength (so to speak,) lay in its leaves, the roots having been pretty well exhausted in forming them. The leaves, as every one ought to know, are indispensably necessary to enable the tree to complete and ripen the growth already commenced, and if the first, main set of leaves be removed, it must put forth a new and comparatively feeble set, with which to finish its growth. To do this, the roots must be *again* severely taxed, which of course enfeebles them, and thus the whole growth is materially checked in the operation, and a comparatively stinted, weakly growth ensues. The tree may, however, after a time, partially recover, so as to cause somewhat of a rapid growth in the bud which has started, in consequence of removing the top above it. This growth will of course be the most rapid and unripe, when other trees not so treated have mostly closed and are ripening their growth, and hence, winter will overtake it still growing, or at least, very much unprepared for that season. Thus, by this operation, the order of nature is seriously broken in upon, which all know cannot be done with impunity.

The effect will generally be, that the growing bud will freeze down more or less, which, with the shock received by the tree at the time it was budded, and when winter sets in, will make the growth the next season much more feeble than if it were treated in the ordinary way. This, at least, is my experience on the subject. I have no doubt if Mr. S. will but try the common method, and if favored with common success in it, he will fully agree with me. Budding in the summer, and removing the top shortly after, so that the bud will start to grow immediately, is, however, practised a few degrees south of here, as I have been informed by Mr. **Alldredge**, an experienced nurseryman living at Indianapolis, Ia. He writes me that he buds mostly in *June* and *July*, and tops 15 days after—that he succeeds better with apples in this way than by grafting, and frequently obtains a growth of from two to three feet the same season. The difference in the length of the seasons, (to say nothing of the difference in the soil,) there and in this latitude, (about 42½,) especially at the east, is so great as to render his success entirely unattainable so far north as this. I can think of but one possible advantage which this method would have over the usual one in this latitude. That is this; so far as I have noticed, the buds, when they first start, after the top is removed *in the summer*, are never troubled by insects, which in the spring sometimes eat out and destroy the buds.

"**Peculiar Growth of Varieties.**"—A few words in regard to what Mr. **Thomas** says in the same number, about "the peculiar growth of varieties." On this subject he and I do not agree fully on some points, but on some of the most important ones we do agree, and I trust I shall be excused for again calling the attention of such of your readers as are interested in this subject, to them.

1st. That the characteristics of fruit *trees*, the description of which I laid so much stress upon in my article in the Horticulturist, to which he alludes, and which I am so desirous of seeing incorporated as a part of the standard descriptions of varieties, in our horticultural works, form "a useful auxiliary to the description of some varieties."

2d. That they furnish "important aid to accuracy to every nurseryman, who" lastly, "*may usually recognize his trees by the appearance of their growth*,"—that is, if I understand him, if he will but take the pains to study and make himself familiar with the peculiar characteristics of the different varieties.

It is earnestly to be hoped then, that our nurserymen and horticulturists will take hold of this thing with a determination to make themselves as thoroughly acquainted with their varieties as possible, so that if there were any "*mixing*" among varieties of trees they had purchased or propagated, they might be able to detect and neutralize the mistake. This branch of horticultural knowledge, is, in my opinion, a very important one, and has been, I fear, sadly neglected amongst us. F. K. Phœnix. *Delavan, Wisconsin, March* 25, 1847.

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Failure in Budding.—I have been, during twenty years past, more or less engaged in budding, grafting, &c. Last year, about the middle of the season of budding, I inserted some buds of the Mayduke, Napoleon Bigarreau, and two or three other varieties of cherries, with almost perfect success, except with the Napoleon Bigarreau. In the case of these, the gum commenced exuding after two or three days, the bark failed to unite with the stock, and *every bud failed*. This was the result with buds set at three different times, at intervals of three or four days. The trees were growing in *five different gardens*—were all apparently perfectly healthy and vigorous, and are now mostly *dead*.

The few that are living look as if they were in "the last end of a hard winter." I know of one other instance in this neighborhood almost precisely similar. What caused the failure of *all* the buds of this *particular variety*, and the *death* of the trees? Bailey. *Binghamton, May* 31, 1847.

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Origin of the Baldwin Apple.—This fine fruit, so much esteemed where it is known, originated in Wilmington, Massachusetts. Its history was given somewhat in detail, several years ago, in the *New England Farmer;* but an abridged and somewhat improved *edition* was given in the *Horticulturist* for January last, by B. V. French, Esq., Vice-President of the Mass. Hort. Society.

"The original tree," says Mr. F., grew on the farm of a Mr. Butters, and was known for a time as the Butters apple. This tree was frequented and pecked by the wood-peckers, and Mr. Butters called it the *wood-pecker apple*. This fruit must have been known about a century. From Col. Baldwin, of Woburn, and his family, who introduced it largely into public notice, it took the name of 'Baldwin,' by which the fruit is now everywhere known. I am informed that Col. Samuel Jaques, of Somerville, eminent as an agriculturist, breeder, and horticulturist, as well as a public benefactor of his age, now owns that part of the farm on which the original Baldwin tree grew, and has placed a monument on the site where it once flourished."

The principal facts as above given, we have more than once learned from Col. Jaques himself. In a letter lately received from him, he says—"Whenever I go to the spot on my farm where this memorable tree once stood, I am carried back in agreeable recollection, to 1784, when I went with Col. Loammi Baldwin, of Woburn, and my father, and saw them take scions from this tree. When Col. Baldwin's scions bore fruit, he sent some barrels of it to a particular friend in England, where it created so much excitement that letters came to this country inquiring for the '*Baldwin pippin*,' as it was there called; hence the name Baldwin apple."

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Early Potatoes.—The very superior early potato, sometimes called "Hall's early June," has been known in this vicinity for eight or ten years past, as "Ross's early," *their true name*. They originated in Scotland, and were brought to this country about ten years since, together with thirty other varieties, by Mr. James Wilson, the well-known nurseryman of this city. He procured them of Mr. Lawson, of Edinburgh, the seedsman of the Highland Agricultural Society of Scotland.

After sufficient trial of all the varieties, Mr. Wilson selected the Ross's early, as the best very early variety. He also selected two other kinds—the Shaw's early, and the Stafford Hall—the latter a late potato of very fine quality. The others he found no better than many old varieties common all over the country, and consequently not worth extending.

The Shaw's early, are a very desirable variety. They are what are commonly called "second early," ripening about fourteen days after the Ross's, and are much better for a general crop, as they are very uniform in size, and very prolific, when grown in good soil. They are oblong; the Ross's round.

I have called attention to the above facts because I think it high time a check be given to the multiplication of names in vegetables, fruits, &c. It is an evil which is rapidly extending itself, and the consequence is, confusion to all who are not on the *qui vive* in detecting it. Herman Wendell. *Albany, June*, 1847.

[The kind of potato which our correspondent thinks is "Ross's early," was brought to our notice by Prof. Hall, of this city, and was first spoken of in the Cultivator for 1844, page 302, under the name of *Early June*. There was, however, in that notice a little mistake in regard to its shape. It was described as *round*, whereas it has a tendency to the *oblong* form,—especially when grown on favorable soil, or when the tubers attain a large size. Our description was given from the first specimen shown to us, which happened not to exactly represent the variety. The larger they grow, the more they deviate from the round form. As to their "true name," we are inclined to doubt whether it is that given by our correspondent. We shall compare it this season with Ross's early, and endeavor to learn its history, that it may receive its true name, if it can be ascertained.

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Extensive Fruit Cultivation.—A large establishment for supplying the Philadelphia market with peaches, sold, in 1845, 25,000 bushels, from 16 cents to $2 per bushel, averaging 50 cents per bushel. For several weeks, two sloops and one steamboat were required to carry the fruit to market. One of the proprietors has just commenced an orchard in Ohio, beginning with setting out 10,000 trees.

Enormous Grape Vine.—A correspondent of the Horticulturist states that there is a native staminate grape vine, growing two miles from Burlington, New-Jersey, on a farm called West Hill, which at three feet from the ground, measures *six feet one inch* round the trunk, and at ten feet high, is three feet in circumference. It is still healthy, and its giant folds run over and cover four trees, one of which is a full sized white-oak, and the others quite large.

Watermelons.—Another correspondent of the same journal, says, "The most successful grower of watermelons that I ever knew, was a person who every year *turned under a piece of sod*, in a good meadow soil, and planted his crop thereon. He counted his crop by wagon loads, when his neighbors did theirs, raised on good, but old garden soil, by tens and scores only.

Experiment with Asparagus.—The London Gardeners' Chronicle mentions the following method of growing asparagus at Nice. Perhaps it does not partake of the character of the marvellous, and it may be very easily tried. "Take a quart wine bottle, invert it over an asparagus root, just rising from the ground, and secure it to its place by three sticks. The asparagus will grow up into the interior of the bottle, and being stimulated by the unusual heat and moisture, will speedily fill it. As soon as this has taken place, the bottle must be broken, when the asparagus will be found to have formed a thick head of tender, delicate shoots, all eatable, and as compact as a cauliflower."

Dried Strawberries.—A London paper states an experiment in drying strawberries, by attaching threads to their stalks, after a little over-ripe, and hanging up to dry. The result is stated to be entirely satisfactory, "that sweet, refreshing acid, peculiar to the strawberry, being in full perfection,—the flavor of the fruit without any watery taste, delicious,—and dissolving in the mouth as slowly as a lozenge."

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received, since our last, from F. E. Hill, A New Englander, J. O. D., L. Sanderson & Co., T. S. M'Lelland, J. B. Oley, H. Matison, J. W. Curry, Bela Hubbard, John Shillaber, A Subscriber, Bailey, J., J. D. J., Prof. Norton, Prof. Horsford, Caius, S., J. G. C., G. S., D. S. Curtis, T.

We omitted to acknowledge in our last number, the receipt of 25 select varieties of Dahlias, from Messrs. **Elwanger & Barry**, of the Mount Hope Botanic Garden and Nurseries, Rochester, for which they will please accept our thanks.

Fine Sample of Wheat.—We have received from Mr. D. A. **Bulkley**, of Williamstown, Mass., a sample of wheat grown from seed received by him from Smyrna, in 1845. It is a spring variety, and is, in size of grain, whiteness, and weight, superior to any spring wheat we have before seen. Should it prove suited to our climate, and yield good crops of a quality equal to the sample sent us, it will be a valuable acquisition to the country.

Guano—Correction.—In an answer to an inquiry last month, 200 bushels of guano were said to be a proper quantity for an acre. It should have been 200 *pounds*. It is applied in quantities varying from 200 to 600 lbs. per acre, but the former is the quantity more generally used.

Recent Importation.—**George Vail**, Esq., of Troy, has lately received from England a Short-Horn heifer, three years old, bred by the distinguished breeder, **Thomas Bates**, Esq., of Kirkleavington, Yorkshire. Her pedigree is thus given: Got by 4th Duke of Northumberland, (3649,) her dam by Duke of Cleveland, (3640,) her grand dam by Belvedere, (1706.)

Sale of Valuable Short Horn Cattle.—We invite particular attention to the advertisement in this number of the sale of Col. **Sherwood's** Short-Horns. There are but few herds in the country which have been selected and bred with such strict attention to purity of blood, and regard to the qualities for which this breed is considered pre-eminent, as this. The originals were obtained from the well known and distinguished herds of the late Hon. **Stephen Van Rensselaer**, Mr. F. **Rotch**, and Mr. L. F. **Allen**. Their descendants in the hands of Col. S., have fully sustained the reputation of their progenitors, and are, no doubt, fully equal or superior to them in valuable qualities. Such an opportunity for the purchase of the best stock of this description, will not, probably, occur again for some time.

Fine Bull for Sale.—We would call atttention to the advertisement in this number, of Mr. **Donaldson's** fine Short-Horn bull *Prince Albert*. The portrait of this animal accompanied our August number for 1845. We are informed that the heifers from this bull have proved very superior for the dairy. It will be seen that he is to be sold at the Saratoga Fair, and those wishing a superior Short-Horn bull, will do well to examine him.

Ayrshire Bull for Vermont.—Mr. J. W. **Howes**, of Montpelier, Vt., has lately purchased of E. P. **Prentice**, Esq., of Mount Hope, near this city, a very superior Ayrshire bull. He is out of Mr. P.'s imported Ayrshire cow, which has attracted much attention on account of her fine symmetry and remarkable dairy qualities—being in all respects a perfect cow *in miniature*. Small as she is, she has frequently given over twenty measured quarts of milk per day, on grass only. The bull is two years old, of good size for *any* breed, very well formed, of thrifty growth and vigorous constitution. In fact, he is one of the very best Ayrshire bulls we have ever seen, and would be "hard to beat," whatever might be the variety from which his competitor should be chosen.

Hereford Cattle.—Messrs. M. & A. L. **Bingham**, of Cornwall, Vt., have purchased of Mr. W. H. **Sotham**, seven head of Hereford cattle—three cows, three bulls, and a bull calf. They are all fine animals. The cows are *Perfection*, a cow of massive size and stately form, *Lucy*, a well-shaped and capital dairy cow, and *Fat-Rumps*, a large and handsome animal. Two of the bulls are a year old the past spring, and are very well formed and thrifty—the other bull, (*Dangerous*,) is five or six years old. This stock will be found well adapted to the section for which it has been chosen, and on the rich pastures of the lake shore, will thrive and fatten with a rapidity not exceeded in their native island.

☞ Besides the above sale of Herefords, Mr. S. H. **Bates**, of Northampton, Mass., has purchased a very fine yearling bull, which was got by *Trojan* out of *Victoria*, one of the best cows imported by Messrs. **Corning & Sotham**. Mr. **William Keese**, of Keeseville, Clinton county, N. Y., purchased some months since, the fine cow *Matilda*, and a young bull out of *Aston Beauty*, which, we hear, are doing well. Mr. **Edward Wells**, of Johnstown, N. Y., has also purchased within a few months, from the same herd as above, two cows, a heifer, one bull, and four two year old steers, all which have been taken to his farm near Johnstown.

Blight in Apple Trees.—Mr. V. W. **Smith**, of Syracuse, has left with us several small branches of apple trees, which are affected with a malady similar to what is called *fire-blight* in pear trees. The blight attacks the trees in a singular manner. In some instances, a small branch at the end of a limb remains green and flourishing, while all the rest appears to be totally dead, the bark discolored, and adhering to the wood. We have not been able to find any insect, nor the ravages of one, which seems to have had any connection with the cause of the disease. Mr. S. informs us that nearly all the apple trees in the vicinity of Syracuse are very seriously affected in the manner above described. If any discoveries should be made in relation to its cause or prevention, we should be glad to give them publicity.

Since the above was written, we have examined some apple trees in this vicinity which appear to be affected in the same manner as those above mentioned. The orchard of Mr. **Prentice**, at Mount Hope, is very seriously attacked, and a large portion of the trees will lose their fruit. Many of the limbs are already dead, and many of the trees will ultimately die.

In fact but few that are not more or less diseased, and fears are reasonably entertained that all may be much injured. The disease seems to be identical with the fire blight of pear trees, which disease has nearly destroyed all Mr. P.'s fine pears.

Libel Suit.—Some of our readers may remember that in our December number for 1845, page 377, the proprietor of the Cultivator replied to certain libellous charges against him, brought by a writer in the

American Agriculturist for the previons month, under the signature of "A Member." In conclusion, we said—"Having thus shown that there was not a shadow of foundation for these charges, is it using too strong language to pronounce the writer of them an infamous slanderer? That his infamy may be proved, and the brand officially placed upon his forehead, the editor of the Cultivator has directed his counsel to demand the name of the writer of the article, that he may be prosecuted for the libel; and if the name of the author is refused, he will hold the editor and publisher responsible." The name of the author having been refused, suits for libel were commenced against the editor and publisher of the Agriculturist. Having no desire to go farther with these suits than to prove the falsehood of the charges brought against us, we cheerfully acquiesced in a proposition to discontinue them on the publication of a full retraction of the charges, in the paper where they were published. This was done, by the publication of the following notice in the American Agriculturist for April last:

TO THE PUBLIC.

"In an article which I wrote, and which was published in the American Agriculturist for November, 1845, charges were made against Mr. Luther Tucker, then Recording Secretary of the New-York State Ag. Society, of using his official influence to promote his personal interests. These charges were founded upon what I then supposed to be good authority; but further investigation has convinced me that there was no foundation for them. I therefore fully and freely withdraw those charges against Mr. Tucker, and believe his statement in reply to those charges, published in the Cultivator for December 1845, to be true."

"A Member."

It will be seen tnat the retraction is full, covering not only those charges which were strictly *libellous*, but also all others brought against us. We cannot but hope that the author of them will learn a useful lesson from the entire failure of his efforts to obtain the object he had in view by the promulgation of these charges. With a degree of integrity commensurate with his ability as a writer, he might reasonably hope to attain the height of his ambition, while a course of intrigue and falsehood will be as certain, in other cases as in this, to be followed by detection and contempt.

Gas Tar.—A correspondent wishes to know whether a coating of *gas tar* will afford an effectual protection against sparks from locomotive engines. If any one can recommend an article which will answer the purpose, stating where it can be procured, the price, and mode of application, they will confer a favor.

Different Kinds of Limestone for Agricultural Purposes.—T. S. Mc Lelland, Esq., Tye River Warehouse, Nelson Co., Va., makes the following inquiry, which we should be glad to have answered by any of our correspondents who are acquainted with the subject:

"We have in many parts of this country, large quantities of variegated or marble limestone, which, in some situations, could be raised at inconsiderable expense. Is it equal to the blue limestone as an improver of the soil? I have heard that it was used, and preferred, in the state of New-York."

Agricultural College in Tennessee.—This institution is located at Franklin, five miles from Nashville, Tenn., We have before us a copy of the "Laws and Regulations," for which we are indebted to T. Fanning, President of the College. We have, on former occasions, frequently spoken of this institution, (see Cultivator, for 1844, pp. 74, 215, 362; and for 1845, p. 79,) and we are much pleased to hear that it continues in a flourishing condition. The following extract from a letter lately received from Mr. Fanning, will be read with interest:—

"You will see we have as much patronage as we could ask, and our system has in every way, succeeded far beyond our fondest expectations. We are enabling some twenty-five promising young men to educate themselves by their own industry; and all our students are much benefitted by the physical department. I suppose there is no institution in the United States in which the same attention is given to chemistry and natural history; and what is most remarkable, our students are generally delighted with such studies. It is my decided opinion, that no plan of making labor contribute to the education of youth, has been fully digested in this country. The great difficulty, you will find in managing agricultural schools, consists in a lack of men who possess a large fund of both *scientific* and *practical* knowledge. It is very idle for men who know not how to perform labor, in good style, with their own hands, and are mere smatterers in science and literature, to talk about agricultural education. My conviction is, that the system will succeed everywhere so soon as competent men can be found to manage it."

☞ The cut of "Black Hawk in Harness." in our May number, is deemed by many a failure, so far as regards a correct delineation of the animal. We did not think the likeness a good one, but were induced for various reasons to publish it The following criticisms on the cut, are by Gen. Silas M. Burroughs, of Medina, a gentleman well acquainted with Black Hawk *as he is*.

"I have received the May number of the Cultivator, containing a likeness of Black Hawk in Harness, and have to express my regret that the picture is a failure—delineating the horse in no point as good as he is—and in many respects, a *very* faulty portrait. The neck has none of that elegance and remarkable boldness of air possessed by the original—it is not "clothed with thunder," as it should be to be faithful. The tail, though like, is not well set. There is an awkward stiffness in the position of the limbs, and the pastern joints are too long and ill set, falling back quite too much. Black Hawk is not faulty in this point. There is a total lack of muscular development, and the whole picture is tame and wanting in character."

Munificent Donation.—Hon. Abbott Lawrence, of Boston, has given Fifty Thousand Dollars to Harvard College, to be devoted to education in relation to the practical sciences. Mr. Lawrence's object, as stated in a letter to the Treasurer of the University, appears to be to secure the establishment of three permanent Professorships, viz: "one of Chemistry, one of Engineering in its various branches, and one of Geology." By the appointment of Mr. Horsford as Rumford Professor, the department of chemistry is provided for, and it is Mr. L.'s design, by this generous donation, to place the three Professorships on an equal pecuniary footing. We are pleased to learn that the corporation has taken measures for carrying into immediate effect the object of the donor, whose name, by this splendid act, will be held by posterity in grateful remembrance.

Did space permit, we should be glad to copy the whole of Mr. Lawrence's very interesting and instructive letter; but at present we can only give place to the following extract, in which some of the defects of our present system of education are strikingly shown:

"For an early classical education we have our schools and colleges. From thence the special schools of Theology, Law, Medicine, and Surgery, receive the young men destined to those professions; and those who look to commerce as their employment, pass to the counting house or the ocean. But where can we send those who intend to devote themselves to the practical applications of science? How educate our engineers, our miners, machinists and mechanics? Our country abounds in men of action. Hard hands are ready to work upon our hard materials; and where shall sagacious heads be taught to direct those hands?

"Inventive men laboriously reinvent what has been produced before. Ignorant men fight against the lows of nature with a vain energy, and purchase their experience at a great cost. Why should not all these start where their predecessors ended, and not where they began? Education can enable them to do so. The application of science to the useful arts has changed, in the last half century, the condition and relations of the world. It seems to me that we have been somewhat neglectful in the cultivation and encouragement of the scientific portion of our national economy."

Draining Tile.—We invite attention to Mr. Chapman's advertisement of draining Tile. A more profitable outlay for the improvement of lands could not be made, in many instances, than for under-draining. A correspondent informs us that he has tried earthen tiles, and found them to answer a very satisfactory purpose. He observes—"along the valley of the Connecticut, between Springfield and Hartford, there are hundreds of acres, the value of which I believe would be increased ten fold by being under-drained, at a comparatively small expense."

The Season and Crops.—Since our last, the weather has been rather cold for summer, and vegetation continues backward. This is particularly the case with Indian corn, which requires a high degree of heat to produce a rapid growth. As to wheat, we are inclined to think, judging from all the accounts we receive, that the crop will be less than an average one. The country east of the Alleganies and south of Pennsylvania, may, perhaps, give an average yield. In the southern part of the district mentioned, the harvest has already, (June 19th,) been gathered, and it is spoken of as good. From most sections of the west, however, the crop is described as not very promising. It was first injured by the winter, and since by the fly. In some neighborhoods, however, it has escaped these injuries, and will give a fair yield. The cool weather has not been unfavorable to wheat, rye, and oats; but unless July and August should give us steady and uninterrupted heat, we fear that our favorite staple, Indian corn, will afford but poor returns. Nothing can as yet be predicted in regard to the potato crop.

NOTICES OF NEW PUBLICATIONS.

The Cultivation of Flax: the Fattening of Cattle with Native Produce; Box-Feeding and Summer-Grazing; by John Warnes, Esq., dedicated to the Landlords and Tenants of Great Britain and Ireland. London: Clowes & Sons.

This is a work which was published in England during the past year, and has attracted considerable attention. Its main object is to encourage the cultivation of flax in that country. The inducements for engaging in the cultivation of the article, are, first, the great value of the seed, when properly used, for the fattening of animals, and second, the value of the lint for various manufacturing purposes. Mr. Warnes, the author of the work, has invented a "compound" for feeding cattle and sheep, which he thinks of great value to the farmer, and which appears to be highly recommended by many persons who have given it a trial. We have often seen notices of this article in the English and Scotch publications, and have on several occasions alluded to it in the Cultivator. Whether the "compound" can be profitably used in this country, has not yet been ascertained; but we should think it especially deserving a trial, and have but little doubt that it will prove valuable in those parts of the country where produce bears the highest price. The mode of preparing "compound" for *sheep*, is given in substance as follows:

A quantity of linseed, or flax-seed, is first reduced by a mill or a machine. Put 168 lbs. of water into an iron boiler, and as soon as it boils, stir in 21 lbs. of linseed meal; continue to stir it for about five minutes, then let 63 lbs. of crushed barley be sprinkled by the hand of one person upon the boiling mucilage, while another rapidly stirs and crams it in. After the whole has been carefully incorporated, which will not occupy more than five or ten minutes, cover it down and throw the furnace-door open. Should there be much fire, put it out.

For *cattle*, the same process is to be observed, but the quantity of water is reduced to about 150 lbs. It is stated, also, that the seed and grain should be more finely reduced for cattle than for sheep, as sheep chew their food better, and more thoroughly digest it. The compound is put while hot into shapes like brick moulds. Several of the boxes are made together, in one frame—the frame being about 28 inches long, and ten wide, with neither top nor bottom. When used, it is placed on a board, which should be a little longer and wider than the frame. The "compound" is pressed into these moulds, and afterwards left to dry. Potatoes, carrots, turneps, or mangel wurtzel, boiled and incorporated with the linseed meal, form a compound upon which cattle fatten with great rapidity.

Mr. Colman, in noticing this process, says—"I place the fullest confidence in these statements of Mr. Warnes. From my own experience and observation, I am convinced that no more nutritious or fattening food can be given to animals, swine excepted, (as it gives an unpleasant taste to the pork,) than cooked linseed or flax-seed jelly, in certain proportions; and it may be mixed with cut hay, or with various other articles of food, with equal success."

Mr. Warnes' book contains, also, particular directions in regard to the culture of flax, and the best modes of preparing it for the different kinds of manufactures. Altogether it is a valuable volume.

The Horticulturist and Journal of Rural Art and Rural Taste. Vol. I. Edited by A. J. Downing, author of "Landscape Gardening," "Designs for Cottage Residences," "Fruits and Fruit Trees of America," etc., etc.

With the June number, the first year of this work was brought to a close. Many doubts were expressed whether a work of this character would be sustained by the public taste. Aware, as we were, of the progress of taste and improvement in rural matters, we had no doubt but such a work, under the editorial charge of a gentleman so competent in every respect to conduct it, as Mr. Downing, would meet with such a demand as to insure its permanence, and we are gratified to learn that such has been the result. Its circulation has already reached to nearly 3000 copies per month, and so flattering are its prospects for the future, that Mr. Downing has withdrawn from his commercial business, that he may devote his time more exclusively to the Horticulturist. As a writer on rural subjects, he has no equal in this country, while he has shown in the volume before us, that he also possesses the peculiar tact, and the industry so necessary to qualify even a good writer of books, for an editor. The work is neatly printed on fine paper—is illustrated by twelve plates, and numerous other engravings of buildings, trees, plants, &c., bound in printed muslin, and forms a beautiful volume of 572 pages.

☞ The July number of "The Horticulturist" the first number of the second volume, is already issued. Among its contents, are the Influence of Horticulture, Design for a Rural Cottage, Architectural Gossip, Hints on the Culture of Geraniums, Descriptions of five fine new Apples, Letter from N. Longworth, The New Japan Lillies, Effects of the Seventeen year Locusts upon the Roots of Trees, Reviews of New Works; Foreign and Domestic Notices, Proceedings of Horticultural Societies, &c., &c.

Terms—$3 per year. Published by LUTHER TUCKER, at the office of the Cultivator, Albany, N. Y.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY for 1846.

THIS volume, the publication of which has been delayed by unavoidable circumstances, is now ready for delivery. It embraces 716 pages, in the usual form, and contains the details of the Society's operations for the last year, together with an abstract of the returns from every agricultural society in the state, and also the Report of the American Institute for the same period. It contains, besides, several elaborate and interesting communications and essays, and in all respects reflects credit on the Secretary, (Mr. JOHNSON,) under whose supervision the work has been compiled and published. A notice of some of the articles will appear next month.

A DICTIONARY OF MODERN GARDENING; by GEORGE WILLIAM JOHNSON, Esq., author of the Principles of Practical Gardening, the Gardener's Almanack, etc., with one hundred and eighty wood cuts: Edited, with numerous additions, by DAVID LANDRETH, of Philadelphia. LEA & BLANCHARD.

THE plan of this work is similar to that of dictionaries in general—that is, the subjects are arranged in alphabetical order. The subjects are treated in an able manner, and many of them are illustrated by well executed cuts. It is in all respects well "got up," and as a work on gardening will prove highly useful.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, June 19, 1847.

FLOUR—Genesee, per bbl, $7.87½a$8. Ohio and Michigan, $7.75.

GRAIN—Corn, Northern yellow, per bushel of 56 lbs., $1 01a$1.05—Wheat, white, per bushel, $1.90a$1 95—Red $1.75—Oats, per bu., 54a56c.

BUTTER—Orange County, per lb., 18a19c.—Western, dairy, 13a16 cents.

CHEESE—Per lb., 7½a8c.

BEEF—Mess, per bbl., $12.50a$13.25—Prime, $9a$9.50.

PORK—Mess, per bbl., $17a$17.12½—Prime, $16.25a$16.37½.

HAMS—per lb., smoked, 10½cts.

LARD—Per lb. 9½a10½c.

COTTON—New Orleans and Alabama per lb., 8½a14½c.—Florida, 8½a14c.—Upland, 8½a14c.

WOOL—(Boston prices.)

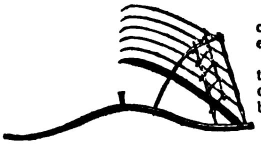
Prime or Saxon fleeces, washed per lb.	45a50	cts.
American full blood fleeces, ...	40a45	"
" three-fourths blood fleeces, ...	35a38	"
" half blood do	30a31	"
" one-fourth blood and common, ...	26a28	"

REMARKS.—Since the arrival of the Cambria at Boston, on the 17th, the market has been rather unsettled. A decline in American flour of three to four shillings sterling per barrel, equal to seventy to ninety-two cents, had been experienced in England. In relation to the state of our market, a cotemporary remarks under date of the 18th, "there were more sellers than buyers, and the market was weakened; Genesee could be bought at $7.87½, and one lot of 2000 barrels might have been had at $7.75a$7.87½. The aggregate sales are about 8000 barrels, mostly at $8. To arrive 1000 barrels sold for July, at $7.25. The orders for shipment, as far as can be learned, are small, and the limits low; it is believed there were no orders from England in market to day, but there was some inquiry for France."

In relation to the causes which have produced the decline in England, the *Mark Lane Express* of 31st May observes:

"The chief, if not the only alteration in our favor, appears to us to be that the harvest, which threatened to be a very late one, may now be reasonably calculated to commence as early as in average years; whilst there is nothing about the aspect of the crops to give rise to any fear as to the probable yield. This is certainly an immense point gained, as we are likely to have the new crop ready for consumption three weeks earlier than was supposed would be the case, which will make a great difference in the quantity required to be imported. The cessation of exportation to the continent has, besides, done away with an extra drain on our stocks; and the reaction in prices thus far appears, therefore warranted by circumstances."

WILCOX'S IMPROVED GRAIN CRADLES.



One of the best, lightest, and cheapest in use—with warranted scythe, complete, at $3.25

Also, I. T. Grant's Celebrated Premium Cradles, constant on hand, and for sale at the Albany Agricultural Warehouse.

L. TUCKER.

July 1.

HORSE POWERS AND THRESHERS.

THE subscriber furnishes the above machines of all kinds at wholesale or retail.

It may be unnecessary again to call attention to the great superiority over all others for the price, of the "Warren Two and Four Horse Powers and Threshers," (which have been so very much improved the last year,) as the many who have purchased and are purchasing, testify.

The undersigned is also enabled again to add his testimony in favor of these machines, as being far before any others he has seen or heard of, after travelling extensively in the southern and western states, and Texas, during the last five months.

Orders for Corn Shellers, Corn Mills, Corn and Cob Crushers, Plows, and all kinds of Agricultural Machines and Implements, will be promptly attended to.

JAMES PLANT,
6 Burling Slip, N. Y. City.

July 1—1t

A BOOK FOR EVERY FARMER.
8,000 sold in Six Weeks.

JOHN P. JEWETT & Co., 23 Cornhill, Boston,

HAVE just published one of the most valuable works for farmers ever issued from the American press, entitled

THE AMERICAN VETERINARIAN, or DISEASES OF DOMESTIC ANIMALS,

showing the causes, symptoms, and remedies, and rules for restoring and preserving health by good management, with directions for training and breeding. By S. W. Cole, editor Agricultural department Boston Cultivator.

Mr. Cole has spent several years in compiling and testing the facts he now offers to the farmers of this country. He has produced a work of great value to every man who keeps but a single horse or cow, but to the practical farmer its value can hardly be over estimated. The whole subject of the *Treatment of Domestic Animals*, is treated in the most thorough manner, comprising the Horse, Ox, Cow, Sheep, Hogs, Dogs, Hens, Turkeys, Geese, Ducks, Birds, Bees, &c., &c. The whole is compressed into one volume of 288 closely printed pages, with 7 beautiful wood engravings, firmly bound in leather. To be sold at the low price of 50 cts., in order to bring it within the means of every man. No pains or expense have been spared on the part of the author or the publishers, to produce a work worthy a place in every Farmer's library.

For sale at the office of "THE CULTIVATOR," and at the principal Book and Agricultural Stores in the country.

JOHN P. JEWETT & Co.

I. T. GRANT & CO'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hope to be enabled hereafter to supply promptly the rapidly increasing demand for that article. These mills have been repeatedly tried, and the principle upon which they operate thoroughly examined and tested by committees appointed by the State Agricultural Society, and in every instance have been declared greatly superior to any that have come in competition with them. They have taken the *first premium* at four of the New-York State Agricultural Fairs, (being all at which they have been exhibited,) and at the State Fairs in Pennsylvania and Maryland. Our mills took the first premium, at the Fair of the American Institute in 1846, and they received the highest consideration at the great National Fair, recently held at the city of Washington. Wherever they have been exhibited, they have received the unqualified commendation of agriculturists, and are believed to be the only mills ever invented or manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle and *smut* at the same time. They will also thoroughly clean all other kinds of grains and seeds by running it through once. We manufacture four sizes, varying in price from $21 for No. 1, to $27 for No. 4, and have no hesitation in warranting them superior to any thing of the kind now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premium wherever exhibited.

Our Fan Mills and Cradles are for sale at factory prices at the following places:

John Mayher & Co., 195 Front-st., New-York.
E. Whitman, 55 Light-st., Baltimore.
Denslow & Webster, Savannah, Georgia.
Fitzhugh Coyle, Washington City.
Baggs & Parsons, Springfield, Mass.
Pierce, Sweet & Co., Burlington, Vt.
J. W. Howes, Montpelier, Vt.
Luther Tucker, 10 & 12 Green-st., Albany, N.Y.
H. Warren, Troy.
J. S. & J. Brown, Newburgh.

Orders thankfully received and promptly attended to, and all goods delivered at Troy, N. Y., free of charge.

I. T. GRANT & Co.

Junction P. O., Renss. Co., N. Y., July 1—tf.

DURHAM BULL—TO BE SOLD.

THE thorough-bred Durham bull "*Prince Albert*," will be sold at Saratoga Springs, in September, at the Show of the New-York State Agricultural Society. He is six years old—a roan—and very managable. For a portrait and description of "Prince Albert," see the Cultivator of August, 1845; and for his pedigree see the British Herd Book, vol. IV., page 882. His sire was the celebrated bull "Sir Thos. Fairfax." The stock of "Prince Albert" has proved to be superior for dairy purposes.

ROBERT DONALDSON.

Blithewood, July 1—3t.*

SHORT-HORNS FOR SALE

THE subscriber has on his farm a few spring calves, (bulls and heifers,) which he will dispose of when 3 to 4 months old, at $75 to $100 a piece.

These animals were all got by his premium bull Meteor, a descendant of his imported bull Duke of Wellington, and heifer Duchess, both of which latter animals he imported from the celebrated Short-Horn herd of Thomas Bates, Esq, Yorkshire, both possessing the blood of his Duchess tribe. The calves offered for sale, are from good milking Short-Horn cows, and having through the bulls Duke of Wellington and Meteor, some half, and others three-quarters of the blood of the Bates bulls, they will be valuable to such as wish to improve their herds. GEO. VAIL.

Troy, June 16, 1847.—2t.

SALE OF SHORT HORNED CATTLE.

IN consequence of being overstocked, I will sell at auction, at my residence in the town of Auburn, on Wednesday, 8th of September next, forty head of thorough-bred Short Horn cattle; consisting of about thirty cows and heifers, and ten young bulls. I shall select from my whole herd, one bull, ("Symmetry,") two cows, and two heifers, which I shall not offer for sale. The remainder of the herd, being about forty, will be sold *without reserve*. The original cows of this herd were selected from the best of the herds of the late Patroon, S. Van Rensselaer, Francis Rotch, Esq., and L. F. Allen, Esq., whose reputation as breeders of fine stock requires no comment from me. The younger stock were reared with much care from my bulls "Archer" and "Symmetry," both of which have received the prize for the best Short-Horned bull, at the Exhibitions of the New-York State Agricultural Society. Archer was bred by Francis Rotch, Esq., of Butternuts, out of his famous imported cow "Adaliza," and got by Rolla. [See Coats' Herd Book, No. 4991.]

"Symmetry" was bred by Geo. Vail, Esq., of Troy, out of his cow Dutchess, and got by his Duke of Wellington,—[see Coat's Herd Book, No. 3654, or American Herd Book, No. 55.]—both of which he imported from the herd of Thomas Bates, Esq., of Yorkshire, England. Full pedigrees will be printed and ready by the 1st of July, to be had at the offices of the American Agriculturist, Cultivator, and Agricultural Rooms, Albany, Genesee Farmer, Rochester, L. F. Allen, Black Rock, or at my residence.

I will also sell ten three-fourths and half bred cows and heifers.

After the sale of the above cattle, I will sell at auction one hundred Merino rams, 10 to 15 South Down rams, Sixty Merino, and thirty grade Merino ewes—the ewes to be sold in pens of three.

That gentlemen not acquainted with my flock of sheep, may form some opinion of their nature, I make the following statement, viz:—

I have taken five clips of wool from my sheep; the clip of 1846 averaged a fraction over four lbs. per head; this was the largest. One of the five clips I sold at thirty-nine cents. The other four I sold to one manufacturing company, at different times, at forty cents per pound, *all at my own house*.

Terms of sale, *cash* or approved endorsed notes, payable at the Bank of Auburn, at three months, with interest.

J M. SHERWOOD.

Auburn, Cayuga Co., N. Y., July 1, 1847.—3t.

A YOUNG MAN who for a number of years has been employed in a wholesale mercantile house, wishes to engage in agriculture. He uses the Cultivator as the organ to speak to some agricultural gentleman who would be pleased to give him a favorable opportunity in the business. A small farm, good land, in a pleasant neighborhood, in New-York or Vermont, he would hire, with a view of purchasing. Any having such, disposed to address post-paid, "Agriculture," Troy, N. Y., may find it to their advantage. His recommendations will be good beyond question.

July 1—1t*

VALUABLE PROPERTY FOR SALE.

THE farm in the town of Halfmoon, and county of Saratoga, at present owned and occupied by John Strachan, containing 551½ acres—of which 427½ are arable, and 124 in woodland. This property is pleasantly situated along the west bank of the Hudson river, six miles above Waterford and Lansingburgh, ten from Troy, and fifteen from Albany, at all of which there is a ready market for farm produce of every kind, and to all which there is convenient access by the Whitehall turnpike, Champlain canal, and Rensselaer and Saratoga railroad, all of which intersect the property. The land, houses, and fences, are in good order. Attached to the mansion house is a large picturesque garden, well stocked with fruit trees and bushes in full bearing—together with a variety of ornamental trees and shrubbery.

If not sold in one lot, it will be subdivided into two or more, to suit purchasers. Part of the price may remain on mortgage for several years if desired.

Further particulars may be obtained by application to the proprietor on the premises, or to PORTER & WALDRON, Waterford.

July 1—1t*

DRAINING TILE,

MADE, and for sale by JAMES CHAPMAN.

Enfield, Ct., July 1, 1847—3t.

FOR SALE.

A FEW very superior Paular Merino sheep—very heavy shearers, and of fine quality; 25 yearling bucks, large and likely, of long staple, and very thick wool. Also, from 50 to 75 ewes, from one to four years old, that are nice, and cannot be matched in the state.* For further particulars, inquire of the subscriber at Newport, R. Island. JOSEPH I. BAILEY.

July 1—3t.

ROCHESTER COMMERCIAL NURSERY.

BISSELL & HOOKER have sold an interest in this establishment to Mr. W. M SLOANE, and the business will hereafter be conducted by and in the name of

BISSEL, HOOKER & SLOANE,

who will execute with fidelity all orders addressed to them.

Mr. HOOKER will visit England and the Continent during the coming winter, for the purpose of purchasing rare trees and plants, and executing any commissions that may be entrusted to him by nurserymen or others. He will leave here about the 1st of December next, and on his return will sail from Liverpool as early next spring as all trees can be moved. He will personally superintend the packing of all his purchases, and accompany them home *per steamer*, unless otherwise directed.

Post-paid communications promptly answered, and orders respectfully solicited.

Rochester, July 1, 1847.—1t.

FARMER AND GARDENER WANTED.

THE subscriber is in want of a *good* farmer to carry on a large farm, considerably improved. Liberal terms would be granted to a suitable man; and among other conditions, one of several smaller farms, owned by the subscriber, of 200 to 300 acres, might be set apart for him, at a low price, on which he might enter on the expiration of his engagement; and in the meantime, improvements, such as buildings, fences, &c., could be made on it on fair terms for his account. He could also be assisted in procuring cattle, sheep, &c., at fair prices.

The subscriber is also in want of a gardener,—one who is well practiced in horticulture. Liberal terms as to monthly wages would be given, or he might receive a share of the products; or if desired, he might receive at the end of five years a farm, which may be selected and the price agreed on in advance. Should he need it, other assistance would be rendered to a good and faithful man. Address JOHN SHILLABER

Dixon, Ill., May 25, 1847.—1t.

ONE OF THE GREATEST INVENTIONS OF THE AGE.

KEPHART'S PATENT FRUIT AND VEGETABLE PRESERVER—by the use of which Fruits, Vegetables, Butter, Eggs, Bacon, &c., can be had at all seasons of the year—possessing all their natural juices and flavor.

The undersigned, having purchased the above patent right for the United States and Territories, excepting the states of New-Jersey, Delaware, Maryland, and the cities of New-York and St Louis, invite the attention of the public to an examination of the scientific principles upon which the above invention is based, as well as its practical utility. For a particular description of the Preserver, see the Cultivator for July, 1847, page 217. They offer for sale patent rights for the construction and use of the Preserver, by states, cities, counties, towns, or individual rights, upon terms that will induce all interested in the growth or sale of fruit and vegetables; also dealers in butter, eggs, or in the curing and preservation of meats, to purchase rights and construct houses.

All desirous of a farther knowledge of the operations of the preserver, can see one in operation, either by calling upon P. Kephart, Western Hotel, Baltimore, Md., who is our authorized agent, or upon the subscribers, Coats-st. Wharf, near Fairmount, Phila.

All communications will receive prompt attention if addressed either to P Kephart, Baltimore Md., or FLACK, THOMPSON & BROTHER, Spring Garden P O., Philadelphia, Pa.

July 1—tf.

VIRGINIA LANDS.

THE subscriber has about 800 acres of land lying within two miles of Manchester, and three miles from Richmond, the capital of the state. About one third is cleared, and a part is under cultivation; the balance is in wood, of the usual kinds in this part of Virginia—pine, oak, &c. There is a railroad running through it, having about half on one side, and half on the other. The lot was formerly the property of two different owners, and there are good buildings on both, with all necessary out-houses, and good wells of water. The land lies level, and is of easy access from Manchester and Richmond, both which are places of undoubted healthiness.

The produce of the farm, including wood and timber, can at all times be sold at full prices The railroad runs down to the shipping, and it is believed that with proper management, the wood and timber would pay twice the cost of the land. A part of the land sold in 1818, for $30 (thirty dollars) per acre. The present object is to sell it in large or small tracts, for cash or credit; or to offer inducements to some company of northern men—say eight or ten, a portion having families, to come out and cultivate on shares. Any communications directed either to Manchester or Richmond, will receive prompt attention. GREEN HALL.

Manchester, Virginia, May 27, 1847—1t.

FOR SALE.

SHORT HORN and Devon Cattle—each thorough-bred of their kind. The cattle of these stocks have been bred many years by the subscriber, and were originally selected from the best herds, and crossed with the best and latest imported blood, with a particular view to the development of their most valuable qualities.

Also, thoro'-bred Cotswold, (long-wooled,) and South Down Sheep, of the best descriptions, descended from the choicest English flocks.

They can be forwarded from here east and north, by canal and railroad, and west by steamboat, with safety and dispatch.

LEWIS F. ALLEN.

Black Rock, N. Y., April 1, 1847.—ap & j'ly.

HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing, Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price, $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.

June 1, 1847. LUTHER TUCKER.

KINDERHOOK WOOL DEPOT.

THIS enterpize has been in successful operation for the past two years, and has fully met the expectations of the wool-growers, who have been its patrons and projectors. It will be continued the present year, conducted as heretofore. The subscriber will be prepared to receive wool as soon after shearing as may be convenient for the growers to deliver it. The fleeces will be thrown into sorts according to *quality* and *condition*. Those who desire it can have their clip kept separate, and sold when ordered. A discrimination will be made between wool in good or bad condition. Sales will be made for cash, and the owners can rely on prompt returns. The charges for receiving, storing, sorting, and selling, will be one cent per lb. and insurance. Liberal advances in cash made on the usual terms. Sacks will be forwarded to those who wish, by their paying the transportation and 12½ cents each for their use, or if furnished by the owner of the wool, will be returned, or sold at their value, as he may direct.

Reference can be had to Dr. J. P. Beekman, Kinderhook, D. S. Curtis, Canaan, C. W. Hull, New Lebanon, Col. Co., J. B. Nott, Esq, Albany, D. Rogers, Hoosick, Rens. Co, C. H. Richmond, Esq., Aurora, Cayuga Co., Col. J. Murdock, Wheatland, Monroe Co., N Y. H. BLANCHARD.

Kinderhook, June 1, 1847—3t.

CORN MILLS.

THE subscribers have just received at their Agricultural Ware house, a newly invented cast-iron mill, for grinding corn and other grain, either by hand or horse-power. It will grind from 3 to 4 bushels per hour. Price. $30.

Also the hand Corn Mill, which grinds from 1 to 1½ bushels per hour. Price $6.50.

These mills are highly economical and convenient, and every farm and plantation ought to have them. They are simple in construction, not liable to get out of repair, and are easily operated. When one set of plates is worn out, they can be replaced at a trifling cost.

A. B. ALLEN & Co.,
May 1—3t. 187 Water-st., New-York.

PERFECTION AND YOUNG ALFRED

WILL stand the ensuing season at my stable, 3 miles southwest of Geneva

Terms—Perfection, $10 by the season. Young Alfred, $6. Insurance to be agreed upon.

Pasturing will be provided for mares from a distance, and attention given them. Accidents and escapes at the risk of the owners.

PEDIGREE.—Perfection.—Sire, imported horse Alfred: dam, imported mare Blossom. To Perfection was awarded, at the late State Fair, a discretionary premium for the best 3 years old, in the 1st class—also the first premium in Ontario Co.

Young Alfred's dam drew the 1st premium at the State and County Fairs, in 1845. GEORGE FORDON.

June 1—2t*

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks and ewes—of undoubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk. R. J. JONES.

Cornwall, Vt., June 1, 1847.—tf.

PLOWS! PLOWS!!

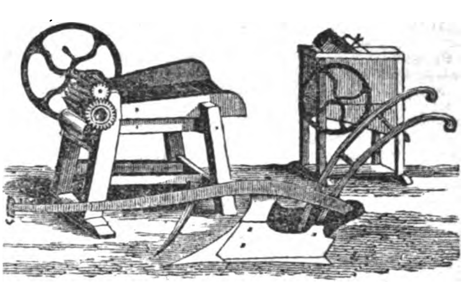
THE attention of Farmers and Dealers is particularly invited to our assortment of Farming Tools—among which may be found a complete assortment of the most approved as well as common plows, including all sizes of the Center Draft, Side-Hill, Subsoil, Self-Sharpening Plows, from Messrs. Prouty & Mears, of Boston. Also, the Eagle, Subsoil, Side-Hill, Self-Sharpening, and others, from Messrs. Ruggles, Nourse & Mason, of Worcester, Mass. Also, the Peekskill Plow, all sizes, from Minor & Horton, of Peekskill, N. Y., and Delano's Diamond Plow—all for sale at the manufacturers' home prices, and warranted. The adjustable Steel Point Self-Sharpening Plows, from the factory of Messrs. Ruggles, Nourse & Mason, is just received. This is a new improvement in the wearing parts of the plow, and has several advantages over the common plows in use. (See R. & N.'s advertisement.) Also on hand Cultivators, Harrows, Seed-Sowers, and Planters, Ox-Shovels or Scrapers, Field Rollers, &c., &c., &c., at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-st., Albany, N. Y. L. TUCKER.

STOCK FOR SALE.

MATCH and single Horses, some of which can trot their mile under three minutes, others rack and gallop easily, making admirable saddle-horses for ladies and gentlemen; Durham, Devon, Hereford, and Ayrshire Cattle; Merino, Saxon, South-Down, and Leicester Sheep: the large white English breed of Swine Berkshires, Poultry, &c., &c. Apply to

A. B. ALLEN, 187 Water-Street, New-York

March 1, 1847—tf.



JOHN MAYHER & CO.

U. STATES AGRICULTURAL WAREHOUSE.

No. 195 Front-street, (near Fulton.) New-York.

Foundry and Machine Shop 502 *and* 504 *Water-st.*

THE subscribers respectfully invite the attention of Merchants and Dealers in AGRICULTURAL IMPLEMENTS to the superior assortment of goods which they manufacture, embracing Plows and Castings of the most approved kinds in use, and possessing all the latest improvements in style, workmanship, and material, among which are the following articles, that can be seen a their warehouse:

Pitts' Corn and Cob Crusher, Price. $40
Sinclair's do.—hand or horse. $30
Fitzgerald's Patent Burr Stone Corn Mill, $60
Sinclair's Cast Plate Corn Mill, $40
Swift's Corn, Coffee, and Drug Mill, $6 to $8
Hovey's far-famed Hay, Straw, and Stalk Cutter;
Sinclair's Hay, Straw, and Stalk Cutter;
Greene's do. do. do.
Mayher & Co.'s do. do.
Langdon's do. do. do.
I. T. Grant & Co.'s Premium Fanning Mill;
J. Mayher & Co.'s do. do.
Boston Centre Draught Premium Plows,
Bergen's Self-Sharpening Plows;
Dutcher's Plows of all kinds;
Hitchcock's do. do.
Freeborn's do. do.
Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price. $55
do. do. 4 do. $75
do. do. 2 Thresher. $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
Warren's do. do.
Sinclair's Corn Sheller and Husker;
Pitt's Horse Power and Threshing Machine;
E. Whitman's Jr., Thresher and Separator;
Subsoil Plows of different kinds.

Cultivators, Wheelbarrows, Canal Barrows, Store Trucks, Horse and Ox Carts, Mule Wagons, Ox-Yokes and Bows, Hames, Trace and Ox Chains, Road Scrapers, Ground Augurs, Shovels, Spades, Pick Axes, Hay and Manure Forks, Rakes, Hoes, Scythes, Scythe Snathes, Grain Cradles, Crow Bars, &c., &c., all of which will be sold as cheap as they can be bought at any other store in the city, and are warranted.

Gin Gear, Segments, Rag Wheels, &c.

Castings of all kinds made to order. March 1, 1847—tf.

HAY AND HARVESTING TOOLS.

REVOLVING HORSE RAKES.—These valuable implements save a great amount of labor—a man and horse being able to perform as much with one of them as eight men could do with hand rakes. Those offered are of the most approved construction

GRAIN CRADLES, of very neat and superior construction

June 1. LUTHER TUCKER

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Just published, in one large octavo volume, illustrated with Twelve Plates, and over One Hundred other Engravings,—neatly bound in muslin—price $3.50—

THE HORTICULTURIST, and JOURNAL OF RURAL ART AND RURAL TASTE, Vol. I., by A. J. DOWNING, Esq., Author of "Landscape Gardening," "Designs for Cottage Residences," "Fruits and Fruit Trees of America," &c. This volume embraces,

I. Designs for Villas, Cottages, Country Houses, Ice Houses, Vineries, Gates, &c., &c., with 23 engravings, with Descriptions and Estimates, and Remarks on the Color of Country Houses.

II. Remarks on Landscape Gardening, the Seeding and Management of Lawns—Planting and Management of Hedges—Selection, Culture, and Description of Ornamental Trees, &c., &c, with 16 Illustrations.

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IV. Description and Cultivation of select varieties of Flowering Plants and Shrubs, with 30 engravings.

V. Gardening in general, Botany, Entomology, Rural Economy, &c., &c.

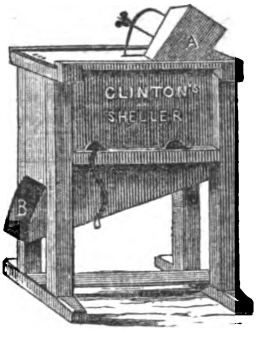
It will be seen from this enumeration of the subjects embraced in this volume, that it is just such a work as is required by the rural population of our country, furnishing, as it does, the information, designs, suggestions, &c., necessary to enable our Farmers and Horticulturists to erect tasteful and convenient residences and out-buildings, and to beautify and adorn them with lawns, ornamental trees and flowering shrubs and plants, and to furnish them with the choicest varieties of Fruits and Vegetables the year round. ☞ Copies of the first volume, stitched, can be sent by mail—Price, $3—postage 37½ cents.

The first number of the second volume of "THE HORTICULTURIST" will be issued on the first of July, and continued on the first of each month—each number containing 48 pages octavo, embellished by a plate, and numerous other engravings. Terms, $3 a year. Published at the office of "THE CULTIVATOR," Albany, N. Y., by LUTHER TUCKER,

and for sale by M. H. NEWMAN & Co., 199 Broadway, New-York—J. BRECK & Co., 52 North Market street, Boston—and by G. B. ZIEBER & Co., Chestnut-street, Philadelphia, by whom subscriptions are received for the second volume.

ALBANY AGRICULTURAL WAREHOUSE,

Nos. 10 and 12 Green-st.

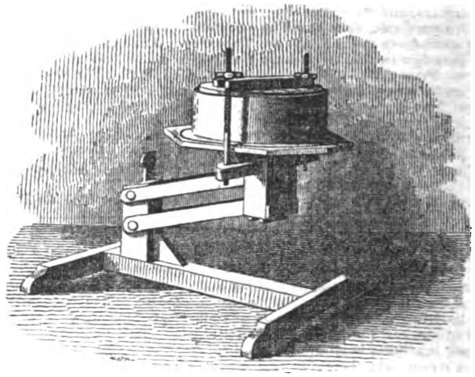


AMONG the numerous valuable machines, implements, utensils, &c., for sale at the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green-street, are the following:

CLINTON'S IMPROVED CORN SHELLER.

This is a very formidable machine—shafts or axles, all of wrought iron, with wooden frame and box—.s adapted for all sizes of ears of corn in the northern, southern, and western states. With single hopper and two men, 200 bushels ears, or with two hoppers and three men, 400 bushels ears are easily shelled per day. Warranted satisfactory. Price, with single hopper, $10—double hopper, $13.

COLLINS & STONE'S PATENT CHEESE PRESS.



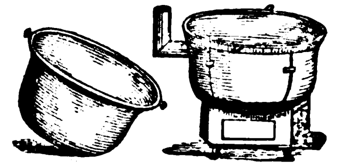
The above cut represents the most compact, light, strong, and convenient Cheese Press in use. It is constructed with compound levers which cause the cheese to receive a pressure from its own gravity, and more or less, as is desired. The advantages in its use are these: The cheese receives a constant and uniform pressure, and a large or small cheese is pressed in proportion to its weight. Warranted satisfactory. Price—No. 1, $5.00—No. 2, $5.50—No. 3, $6.

KENDALL'S CHURNS.

Too much has not been said for this labor saving and convenient churn. The sale of them for the last few years, has been unprecedented by any other churn, and so general satisfaction is given by its use, that not one in a thousand has been returned, although all are warranted satisfactory. The prices for this excellent article are as follows:

No. 1,	suitable for 2 cows,	$2 00
" 2,	" " 3 to 5 do.,	2.50
" 3,	" " 5 to 8 do.,	3.00
" 4,	" " 8 to 15 do.,	3.75
" 5,	" " 15 to 25 do.,	4.50

MOTT'S PATENT AGRICULTURAL FURNACES.



Constantly on hand, all sizes of these celebrated furnaces, at the manufacturer's prices, as follows:

15 gallons,	$10	60 gallons,	$23
22 "	12	80 "	30
30 "	15	90 "	35
40 "	18	120 "	40
45 gallons,	20		

REVOLVING HORSE RAKES.

A good assortment of these valuable labor-saving machines, from different manufacturers—price, $7 to $9. (For an engraving and description, see page 217 of this paper.)

HAY FORKS AND HAY RAKES.

Partridge's Cast Steel Hay Forks, all sizes, warranted the best in the world. Also, Hand Rakes, all qualities, from different manufacturers—75 cts. to $4 per dozen. LUTHER TUCKER.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, AUGUST, 1847. No. 8.

BREEDING HORSES—No. III.

As there have been but few examples of systematic horse breeding in this country, I am under the necessity of making frequent reference to the English practices. The course which has been pursued there, may be expected to produce similar results here, so far as it is followed, especially as our horses have been chiefly derived from various descriptions of English stock.

It is generally admitted that no description of horse is better calculated for light carriages on the road, than the hunter, as he existed in his truest form and best character. "To describe the hunter," says Prof. Low, "is to describe a well-formed horse, in which exists that harmony of parts which consists with the best exercise of the powers of the animal. The perfect English hunter is beyond a question the finest variety of horse that exists in any country, combining in a happier proportion than the race horse, the lightness of the horses of the warmer regions, with the strength of the ancient racers of Europe. If we compare the hunter in his conformation, with the race horse, we shall find him inferior in the characters which indicate the power of speed, but far excelling in those which show the adaptation of the animal to useful services."

The hunter is used in England not only for the chase, but for the saddle, for military purposes, as chargers,* and for the lighter carriages. Prof. Low shows wherein the characteristics of the hunter should differ from those of the race horse. "The hunter," he says, "should possess a good fore end, that he may pass safely along the rough surface over which he is urged, and over the obstacles which he encounters. The low fore end and elevated hind quarters, which are suited to the power of rapid progression over a smooth surface, would, in the hunter, be inconsistent with safety; and the tendency to ewe neck, which in the short and violent gallop of the course is admissible, would in the case of the hunter, be inconsistent with sensitiveness to the rein. The neck of the hunter should be sufficiently muscular, and his chest just so broad as to indicate strength without heaviness. The long stride of the racer not being required in the hunter, he should possess the conformation which indicates strength in the dorsal and lumbar regions, that is, he should be well ribbed home, and have the back moderately short."

Mr. Youatt says—"the body [of the hunter] should be short and compact compared with that of the race horse, that he may not in his gallop take too extended a stride. This would be a serious disadvantage in a long day and with a heavy rider, from the stress on the pasterns, and more so when going over clayey, poached ground. The compact, short-strided horse, will almost skim the surface, while the feet of the longer reached animal will sink deep, and he will wear himself out in his efforts to disengage himself. Every horseman knows how much more enduring is a short-bodied horse in climbing hills, although perhaps not quite as much so in descending them. This is the secret of suiting the race horse to his course, and unfolds the apparent mystery of a decidedly superior horse on a flat and straight course, *being often beaten by a little horse*, with *far shorter stride on uneven ground*, and with several turnings."

Compare these remarks with those which describe the characteristics of the race horse.

"The race horse has been cultivated for a particular end, and the purpose of the breeders has been to call forth in the highest degree those characters which indicate the power of rapid motion. These purposes have been fulfilled, and the form of the animal answers the conditions required. * * * His length is greater than consists with perfect beauty, the power of speed having been sought for in a higher degree than that of strength and endurance. His legs are longer and his trunk smaller than the eye indicates as strictly graceful. The length and depth of the hind-quarters, a point essential to the power of making long strides, are extended to the degree of appearing disproportionate. The chest is narrow, and the fore-quarters light, a point likewise characteristic of speed. The neck is straight, rather than gracefully arched, and the pasterns are very long and oblique."

These points, although they indicate the adaptation of the animal to the purposes for which he is destined, and in this respect furnish a striking example of the art of man in controlling the animal economy—clearly show that some of the valuable properties of the horse have been sacrificed. With a view to securing the object sought for, speed in the gallop, this may be to a certain extent justifiable. As is observed by Prof. Low—" strength and the power of endurance may be sacrificed for the property of speed, and even soundness of constitution to the artificial uses to which we destine the animal. Not only may these things be, but there is reason to infer that this unrivalled breed has already suffered deterioration."

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* A writer in the *Farmer's Library*, vol. I., page 301, states that the English cavalry, at the battle of Waterloo, were mounted on *blood* horses. His language is that Bonaparte, "in making his last tremendous struggle to retain the crown of France, experienced and ruinously felt the superiority of blood horses, on which the English cavalry were mounted." This statement is incorrect, as the following testimony shows. Prof. Low says—"The cavalry horse is selected from the *mixed races* of the country. They have the characters of the modern coach horse, and not the horse of heavy draught. They would have been the pride of the times of chivalry, and afford now the example of the most powerful cavalry horses that are anywhere to be found. The memorable field of Waterloo showed their importance. It is known that the lighter mounted regiments would have been overborne by the heavy-armed cavalry of France, but for the presence of the *household troops*." Mr. Youatt, in his work on the horse, observes—"A considerable change has taken place in the character of our war-horses; lightness and activity have succeeded to bulk and strength, and for skirmishing and sudden attacks, the change is an improvement * * * There was however, some danger of carrying this too far: for it was found in the engagements previous to and at the battle of Waterloo our heavy *household troops* alone were able to repulse the formidable charge of the French guard." These were the "*terrible horses*" to which Bonaparte alluded when he saw his own horsemen "literally rode down."

And how has the hunter, which we have seen possesses a rare combination of valuable qualities, been bred? The impression, I am aware is entertained by some, that the hunter possesses no such distinctive characteristics as entitle him to be ranked in a separate class; in fact, it is not long since a gentleman, somewhat noted for his knowledge of "horse flesh," was heard to remark that hunters were never kept as stallions, and that mares intended to breed them were *always* put to blood horses. It is true that blood horses have been often, but not invariably, resorted to in breeding hunters; and it seems to be equally true as will be presently shown, that the infusion of this blood to too great a degree, has been one of the causes of the deterioration of the hunter in strength and constitution.

But in relation to the origin of the hunter, we are informed by Prof. Low, that the lighter and more agile horses of the warmer countries have been mixed in blood with the pre-existing races, so that the form of the latter has been moulded to a new standard. * * * The hunters have been mixed *not only with one another*, but with every other race which seemed fitted to give the conformation and characters required. The horses of Spain, Italy, and Turkey, nay, of Barbary and Arabia, have been resorted to. * * * The mixture of the blood of the race horse with that of horses designed for the chase, has been continually increasing, so that the characters of the *modern* hunter have been more and more approaching to those of the thorough bred horse. Yet a great distinction has hitherto existed, and ought still to be preserved between them."

To establish a race of horses of this description, is no easy thing, to be accomplished in a year or two; but a work requiring a long course of systematic breeding, continued through many generations. The noble characteristics of the hunter, as he formerly existed, are not to be produced, as some appear to suppose, by a *single cross* of the blood horse with common mares—especially at this day, when, as we have seen, the blood horse (as a breed,) has lost many of those properties which formerly imparted value to the hunter.

The diminution in England of hunters of the old standard, which has taken place from causes to which I have before adverted, is regarded by many as a serious loss. Prof. Low's observations on this point are worthy particular attention, both as showing the great value of this description of horses, and the difficulty of producing a new stock of similar and uniform characteristics. "We may be assured that the race of true hunters, if materially diminished or injured in their characters, will not without great difficulty be restored. A simple cross between a thorough-bred horse and a common mare, may produce a good individual, but this is very different from that progressive change by which a class of characters can be communicated and rendered permanent, and a true breed formed."

But the old-fashioned hunter has of late given place in the hunting field to a horse of more blood—to one in fact, possessing the principal properties of the modern blood horse; and this is regarded by some as evidence that the blood horse is better adapted to laborious exercise than the hunter. But a very different conclusion will be formed by a fair view of the whole case. We are told by British writers that the fashion of the chase has greatly changed—" that it is now become a short and fiery gallop." To correspond with this change, a horse of different properties is chosen. Instead of the substantial kind of hunter, who could carry his rider and bear the fatigues of the chase for a whole day, a lighter animal, with more speed for a short distance, but with far less strength and capacity for endurance, is used; so that two horses are now required to perform the work which one did before. Prof. Low informs us that—" it is now common to have *relays of horses*, so that a sportsman may mount a fresh one when the first is exhausted." Again, he observes, in regard to these changes in the fashion of the chase,—" it is to be feared that refinement has been carried to its limits. The rapidity of the chase has been carried to a degree that assimilates to the sport of a race, animating, certainly, to the highest degree, but differing in the feelings which it excites, from the legitimate exercise of the hunting-field. The effect begins to be perceived in the character of the horses employed, which, in the great hunting counties, are manifestly tending to a lighter form than ought to characterize the hunter." EQUUS.

ELECTRO-CULTURE.—Much was said a year or two since, and high expectations raised, relative to accelerating the growth of vegetables by electricity. Plats of ground were encircled by wires buried beneath the surface of the soil, and connected with upright pointed conductors, for stimulating the growing plants,—the operator forgetting that the moist soil, being a free conductor of electricity, dissipated in a moment every particle of the fluid that came down the rods, and not reaching the plants; and also forgetting that if the soil were not a conductor, the electricity thus brought down could never reach them;—two conflicting absurdities thus lying at the very threshold. Extraordinary expectations were also raised by the occasional observance of the great luxuriance of some plants at the foot of lightning rods—resulting from growing in the deep bed of mellow soil made by digging the hole for the lower end of the rod.

Accurate scientific experiments have been lately made under the supervision of Professor Solly, of the London Horticultural Society, which set the matter finally at rest. A large and powerful cylinder electric machine was used. and the plants, in pots. within doors, were kept heavily charged, four hours each day, for four weeks; and although the experiment was varied in many different ways, not the slightest influence could in any case be perceived, either favorable or detrimental to vegetable growth. The plants operated upon, several pots of each sort being taken, were young French beans; young plants of the common scarlet geranium; plants of the strawberry; seeds of wheat; and seeds of mustard and cress. Experiments were afterwards made in the open air, on a number of different plants, and the machine worked four hours each day for nearly six weeks, but not the slightest difference could be observed between those electrified and those not.

LARGE CORN.—A correspondent of the Southern Planter describes a field of corn which he saw on the farm of W. Gilmer, 6 miles west of Charlottesville. It was in drills five feet apart. "We rode through it; but it was more laborious than riding through a thicket of woods; for though we went in the widest row we could find, it was difficult to keep the blades and stalks from dismounting me. The tassels were beyond the reach of my cane, and I on horseback." The land was the richest alluvial flats. From 20 to 40 barrels per acre were harvested from it.

DAIRY MANAGEMENT.

In our August number of last year, we gave some account of the dairy and farm of Mr. B. H. **Hall**, of New Lebanon, Columbia county, N. Y. Mr. H. received the first premium of the New York State Agricultural Society, last winter, for the best butter dairy. We congratulate him on his success, and are confident it is deserved. There are but few farms and dairies in the country which are managed more economically and profitably than Mr. **Hall's**. He commenced operations under circumstances which would have discouraged many men, but which have been completely overcome by his energy and perseverance. A gentleman who has long been well acquainted with Mr. H., observes, in relation to his course of farming—" His has been a *venture* which few but a *gentleman* farmer of wealth would have dared to undertake. I recollect well the predictions of many, that 'hiring so much help' would ruin him; but what has been the result? While they have jogged along in the old way, little more than paying their expenses, he has, by the addition of labor, rendered the nett income of his farm double that of any one in town, of the same number of acres.

" The fear of the expense of labor, is the rock on which many of our farmers have been stranded. They will only hire help enough to raise just sufficient for the wants of the family, leaving no surplus to lay up for a *wet day*, never thinking that an additional hand for six or seven months, would add, if judiciously employed, fifty per cent to the productiveness of the farm, and then leave a handsome sum to be laid by at the end of the year. It should be impressed on the minds of farmers that the principle of the success of our large manufactories, is the over production beyond the support of the families engaged in them. Hence, if they only do just enough for their support, there can be no income."

We copy from the *Transactions*, Mr. **Hall's** statement, as follows:

My farm is located in the valley of New Lebanon, Columbia Co., in about 42½°; contains about 180 acres of improved land, which is composed of a variety of soils,viz: an alluvial clay loam on the flats, (about one-third of the whole,) which are generally kept in meadow. The other portions are gravel loam and slate and gravel, with the exception of some twenty acres, which are wet clay and gravel pastures, with a hard subsoil, bearing the variety of grasses usual on wet pastures. The other pastures used, are plowed and cropped in their rotation, say two years in every five, and are stocked with clover and herds grass. Hay used, clover and herds, with a slight mixture of red top on the low grounds.

My dairy is composed of 16 cows; 3 three years old heifers, and two two years old. Cows of native breed, one full blood short-horned heifer, the others half bloods; the full blood heifer suckled her own calf and another, a half blood, through the season. One of my best cows lost her udder before the 1st of August, by the kine-pox, which disease very much injured the whole dairy for about five weeks. I also parted with one cow the last of September.

Estimating the four heifers to be equal to three cows, I had no more than nineteen cows through the whole season. Add to this the hottest weather ever experienced for the same length of time, and a severe drouth for some five weeks, and I believe I have enumerated all the disadvantages under which I labored.

The feed of the cows was hay, grass, and dry corn stalks, with the exception of 30 two-horse wagon loads of pumpkins. The product was as follows:

3,189 lbs. of butter, sold in the Boston market, at an average price of 19½ cents per lb., which price perhaps is a fair criterion by which to judge of its quality, ...	$621 84
20 calves sold and two raised, ...	91 50
Cream and milk used in a family of ten persons, at 15 cts. per day, ...	54 75
Skimmed milk and buttermilk fed to the hogs 215 days, at $1.30 per day, ...	279 50
	$1,047 59

The average quantity of milk from each cow per day, for 215 days, 26 lbs. Aggregate quantity for each cow, 5,590 lbs. Quantity of butter to the 100 lbs. of milk, 3 lbs. 3 oz. Gross quantity of milk and butter, 109,395 lbs.

Method of making.—Room used, kept as near a temperature of 60 degrees as may be.

Milk strained into a large can placed in the milking yard, which adjoins the milk room, inside of which it is drawn by means of a conductor and faucet into the pans, usually about eight quarts in each pan; it is drawn over ice placed in the can whenever the temperature requires, consequently the cream rises in much less time than when cooled in the ordinary way. It ought to stand 36 hours before being skimmed, but this time must be varied occasionally, as the weather changes. It should be skimmed when the milk is slightly changed, and before it is coagulated. The cream is put into stone jars and placed in a refrigerator in contact with ice, until it is churned, which is done every second or third day. Churn used, a circular one with revolving arms or paddles, framed into a shaft of *wood;* cream should never come in contact with iron. The motive power is a platform wheel turned by a small horse. The butter is salted with ground rock salt, passed through a fine sieve, that there may be no lumps or particles that will not dissolve. (How often have you had your teeth set on edge by coming in contact with a lump of salt, in otherwise good butter?) It is salted to suit the taste, and the market, (which requires it very mild unless it is designed for keeping a longer time than usual;) it is then placed in the refrigerator and kept cool until it is taken out, worked on an inclined table with a break, packed in new tubs containing 25 lbs., and sent to market, which is done every week, always using ice in every part of the process, the weather requiring it.

The committee will be better able to judge of the value of the milk and buttermilk, for hog feed, when I state that I have sold pigs, pork, and lard, to the amount of $1,063.09, at an expense of $667.00, for purchase money and feed, other than milk, and that my hogs have made, of the feed and materials given them to *work*, near 300 half-cord loads of manure, *the value of which every farmer ought to know.*

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Dairy Statistics.—The committee appointed by the Society to award premiums on butter dairies, of which Hon. Mr. **Denniston** was chairman, appended to their report some interesting statistics, showing the great value and importance of this department of husbandry. We invite attention to their remarks, which we herewith copy:

The committee would ask indulgence for a few moments to remark, that butter dairies constitute the most valuable agricultural interest in this state, and cannot receive too much of the fostering care of this society.

In looking at the returns of the last state census, the article of wheat appears, at the first view, to be the most valuable crop produced in the state.

The number of bushels raised in one year, is given at 13,391,770, which, at 90 cts. per bushel, which is believed to be a fair average price in all parts of the state for several years together, yields $12,052,593.

The quantity of butter made during the same year, was 79,501,733 pounds, which, at twelve and a half cents per pound, which is believed to be a similar fair average price, yields $9,937,716.

To this may fairly be added, for increase of the butter dairy, as follows:

There were milked the same year, 999,490 cows, of which number three-fifths at least, it is estimated, were appropriated to butter dairies, and the remainder to cheese dairies. Three-fifths of the whole number would be 599,685, which would yield say 500,000 calves, after throwing away the 99,685 for casualties, and in conformity to a custom which prevails in some places, of killing them when one or two days old—enough, the committee think, to warrant them in saying that the increase of the 500,000 cows, in the shape of veal and calves raised, would be equal to two dollars per head, which would give $1,000,000.

There were the same year 1,584,354 hogs, worth doubtless upon an average, three dollars per head, one-third of which number may be considered as raised annually by the milk from the cows used for butter dairies. One third of the whole number is 528,114, which at three dollars each, is $1,584,342. The whole may be summed up as follows:

79,501,733 lbs., butter 12½ cts. per lb.,..	$9,937,716
Increase of 599,685 cows, after deducting the 99,685 for casualties, &c., as above, say 500,000, at $2 each,.............	1,000,000
528,114 hogs, at $3 each, ...	1,584,342
Total,.........................	$12,522,058
The crop of wheat, as above, deducted,..	12,052,593
Leaving a balance in favor of the butter crop, of	$469,465

If the committee have estimated the increase from the cows too high, or if they have put down too many hogs as the product of the butter dairy, either or both items may be much diminished, and yet leave a balance in favor of the butter crop.

Another advantage of the butter dairy over the wheat crop, consists in the cost of labor of production and transportation to market. The labor of females and boys is used mainly in the milking of cows and making the butter, which is cheaper than the labor required in plowing, sowing, and threshing the wheat, and carrying it to market.

The cost of transportation to market is greatly in favor of the butter dairy.

Forty firkins of butter and three tons of pork would be considered a good crop from a very considerable farm, and yet this quantity would not make more than five or six two horse wagon loads, while six hundred bushels of wheat, the product of a moderate farm, would make twenty wagon loads, and the cost of railroad or canal transportation would show a similar inequality.

Moreover, the process of grazing in making the dairy crops, continually fertilizes the soil, and in this respect it exhibits a decided advantage over the wheat crop, as the process of plowing gradually wears upon and reduces its fertility.

The butter dairy is also very uniform and reliable, while the wheat crop is subject to many contingencies.

The above calculations are not claimed to be quite accurate, but they are believed to be sufficiently so to show that the butter dairy is the most valuable farming interest in the state, and worthy the most favorable regard of every friend of agriculture.

PROPORTION OF THE AMERICAN POPULATION ENGAGED IN AGRICULTURE.—Hon. ELISHA WHITTLESEY, in an address before an agricultural society in Ohio, gives the following statistics in relation to the number of persons engaged in different occupations in this country, from which it appears those engaged in agriculture outnumber those engaged in the learned professions, navigation, manufactures, and commerce, *more than three to one*; and the annual value of agricultural products is upwards of 650,000,000 of dollars:

No. of persons in the learned professions,	65,255
" " internal navigation,...	33,076
" " navigating the ocean,...	56,021
" " manufactures,.........	791,749
" " commerce,..........	117,607
" " agriculture,.........	3,719,951
The annual value of agriculture is,.....	$654,387,579
The value of importations for the fiscal year, ending on the 30th of June last, was,............................	121,691,797
The value of exportations, domestic and foreign, for the same period, was.....	113,488,516
Amount of imports and exports, ...	$235,180,313

which is some over one-third of the value of our agriculture.

......

SALT NOT A PREVENTIVE OF THE POTATO DISEASE.—THOS. W. WARD states, in the *Massachusetts Plowman*, that he has tried salt for potatoes by putting it on the hill at planting time, both before and after the potatoes were covered. He could not perceive that it did in the least prevent or check the rot; but when the salt was put on before the potatoes were covered, "it very much retarded the coming up of the potatoes,—some of the hills being a week and more behind their neighbors where no salt was put; nor did it prevent the mouldering of the leaf and the decay of the top."

Prof. JOHNSTON, in some remarks on the potato disease, in a late number of the Edinburgh *Quarterly Journal of Agriculture*, observes—"It has been said, in some parts of Scotland, that the disease was prevented by the use of saline mixtures, in 1845, but the same mixtures failed of their effect in the hands of the same parties in 1846. At the present moment, sulphate of magnesia is lauded as a specific against the disease, because of some supposed good effects produced by it near Whitby, in 1846. I fear, however, that should the disease be equally virulent and extensive in 1847, this salt will lose its character like all the others."

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SUCCESSFUL SUBSOILING.—Henry Colman says, that Smith of Deanston, when he commenced operations, about 20 years ago, had on a part of his farm not more than four or four and a half inches of surface soil; but having applied the system of thorough draining, and used the subsoil plow, he can now turn up more than 16 inches of good soil. Subsoiling had failed in some parts of England, where very heavy clay and quicksand prevailed. In one case there was a crop of 35 bushels of wheat per acre, where the subsoil furrows were across the drains; and only 27½ bushels where they were parallel with the drains

MICHIGAN AS AN AGRICULTURAL STATE.

Messrs. Editors—Having been a subscriber to the Cultivator, as well as a constant reader, since its commencement, I feel in some sort entitled to claim a place in your columns. At a time when so much attention has been attracted to western lands, as is shown by the great and increasing emigration from the Atlantic states, and when much and intentional misrepresentation exists, I purpose to send you a few observations on the agricultural capabilities of Michigan. These are designed not so much to create a favorable prejudice in behalf of my adopted state, as to exhibit, in a just light, the distinctive characteristics of the eastern and western states, and in particular of that one of the latter which has been the subject of perhaps both extremes of misrepresentation. I am encouraged to this by the opinion that your journal is one of that extended circulation and liberal character which invites information from all parts of our varied country.

I commence, then, with some observations upon the General Character of the Lower Peninsula of Michigan.—One of the most striking features of Michigan, is the great extent of water by which it is surrounded. The chain of great lakes form a peninsular coast of more than 1,200 miles, which is supplied with an uncommon number of good harbors.

The latter are due, mainly, to the unusual volume and depth of the streams, some of which are navigable for river steamboats for more than 100 miles from their mouths. On the western coast, these streams generally expand into lakes just within the bar at their mouths, many of which are sufficient in size and depth to float a navy. It will at once be obvious that these features afford the peninsular state a more ready and cheap access to markets, from every part of the interior, than any other equal extent of territory in the union.

Michigan is also furnished with an unusual number of small interior lakes, which cover a proportion of her surface equal to one acre in thirty-nine.

The fact is well established that climate depends less on latitude than on the conformation of the surface and the relative position of land and water. The great inland lakes of the northern frontier of the United States, as they are one of the most striking characteristics of its physical geography, so they give rise, in connection with some other features, to the most remarkable modifications of climate. It is not my purpose to discuss the causes of this phenomenon, but simply to exhibit facts; and that these may not appear to be mere hypothesis, let us appeal to an acknowledged authority—the thermometer. Dr. Forrey, author of a work on "the Climate of the United States," comparing the observations taken at the different military posts of the United States, remarks, that "at the posts on large bodies of water, the mean temperature of winter is higher, and that of summer lower than in the opposite localities. Thus, Fort Brady, at Sault Ste. Marie, shows a difference of only 42 degrees 11 minutes, between the mean temperature of winter and summer, while Hancock Barracks, half a degree further south, in the state of Maine, distant only 150 miles from the sea coast, exhibits a difference of 46 degress 19 minutes, and comparing the warmest and coldest month, the difference of the former is 47 degrees 22 minutes, and that of the latter 54 degrees 70 minutes." Again, "so remarkable is the influence of large bodies of water in modifying the range of the thermometer, that although Fort Brady is nearly 7 degrees north of Fort Mifflin, near Philadelphia, and notwithstanding the mean annual temperature is 14 degrees less, yet the contrast in the seasons of winter and summer is not so great at the former as at the latter." During a residence of eleven years on Detroit river, the extreme lowest point of the thermometer was 12 degrees below 0, while in central New-York the thermometer several times, within the same period, sank to 35 degrees below.

Winter in Michigan lasts from three to four months, during most of which the ground is covered with snow, to the depth of from one to two feet. During eight months of the year cattle will find subsistence for themselves, in the woods and plains. The ground is fit for the plow about the 20th of March, and frequently much earlier. About harvest, which is in July, there is very commonly a period of several weeks duration, during which scarcely any rain fails. This circumstance, though often prejudicial to some crops, is of advantage to the wheat grower, enabling him to harvest that staple article with the least labor, and free from rust.

I do not remember to have seen this fact alluded to, as among the characteristic advantages of Michigan, as a wheat producing state, but it deserves to be.

The prevailing winds, for at least four days in five, throughout the year, are west or south-westerly, and these are almost invariably attended by pleasant weather. The north and east winds are sometimes attended by cold storms, but never of so long duration as on the Atlantic coast. Showers come from the west or southwest; last generally but a few hours, and are most frequent in the night. These facts, added to the usually mild character of the westerly winds, and the effect of the surrounding waters in equalizing the temperature, give to Michigan an uncommon proportion of clear days, and a climate more than ordinarily free from sudden and great variations, and from long periods of cold wet weather. In short, they produce that happy medium between extremes, which is the most healthful and desirable.

The autumns are commonly mild and protracted; the season of Indian summer, which lasts from two to six weeks, being one of the most soothing and delicious known under any parallel on the globe.

To these favorable features there is frequently a drawback in the variable weather of spring. This is subject to frosts, occurring sometimes in April or May, several weeks after the orchards are in bloom, and which greatly impair if not destroy the prospect of fruit for the year. This calamity occurs about as often as once in four years.

Another most important feature of Michigan, is the *character of her soils*. While in the more broken districts of the eastern states the soils are in great part derived by decomposition from the underlaying rocks, are usually of little depth, and in the primary districts, (which include most of New England,) of sterile character, those of Michigan are made up of the relics of previously existing rocks, or of the rocks of distant portions of the country, which have been broken up and spread over the surface, by widely operating geological causes. Whatever these may have been, it is sufficient for our present purpose to say, that they have covered the rocks of the peninsula with a deposit, varying from one to 100 feet in depth, consisting of sand gravel, and water-worn masses, from a great variety of rocks, with occasional local beds of clay.

The peculiarities of the soils thus constituted, are, first, their extreme depth, and loose, gravelly texture; permitting the copious absorption, retention, and percolation of rain water, and giving rise to great abundance of springs, streams, and lakes; allowing a wide range for the roots of plants; rendering the soil easily arable, and less susceptible to the effects of drouth. Secondly, the fertile nature of the materials. Limestone being one of the most abundant rocks of the peninsula and the adjoining lake country, *lime* constitutes a large ingredient in those soils; the abundance of that mineral being apparent, not only as a constituent of the soil, but in numerous and extensive beds of marl. To this fact, in an eminent degree, is to be attributed the superior adaptation of the soils of Michigan for *wheat;* that grain, as is well known, demanding a large supply of lime.

The trap rocks, which exist to a great extent in the region of lake Superior, also furnished a large proportion of the constituents of this deposit, and these rocks are known to produce some of the most fertile soils on the globe. To this character of the soil is added a rolling surface, with sufficient descent from the higher grounds, (which are about 600 feet above Lake Erie,) to give rapidity to the streams, and furnish a vast amount of water power.

These characteristics, in connection with some already alluded to, tend to give a salubrity to the climate which is not found to an equal extent in other parts of the Mississippi valley. Probably no new country is more free from prevalent diseases than those parts of Michigan which have not been rendered unhealthy by artificial agency. The unusual number of mill dams, which are not unfrequently made to flood large tracts covered with timber, are rendered by the haste and imprudence of settlers, a chief source of febrile disease, and have helped to give erroneous impressions of the true character of the country.

None of the new states have been more fortunate than Michigan in the character of its inhabitants, most of whom are thrifty and intelligent farmers and capitalists from the eastern and middle states. The amount of capital expended in public improvements, roads, and mills, since 1836, equals that of many parts of the United States which have several times its population. Yet the annual surplus of its great staple, for exportation, much exceeds its capabilities in that particular. With a population of 300,000, the wheat crop of the last two years probably exceeds 15,000,000 of bushels; a proportion greater by at least one third, than that of any other state in the union. The average yield of wheat may be stated at 20 bushels per acre, and the price per bushel at from 50 to 80 cents. The price of unimproved lands varies from $1 to $5 per acre; that of improved farms from $5 to $20. From these data my eastern readers may calculate for themselves the comparative profit of farming here and with them.

The advantages of Michigan as a wool-growing state are beginning to be appreciated. The surface, broken into gentle hills and valleys, is covered with a spontaneous growth of grasses, which are relished by sheep and cattle, and will alone furnish them sustenance for at least eight months in the year. The export of wool from Detroit alone in 1844, but a few years from the first introduction of sheep into the state, was 236,000 lbs. Since then, the hills and meadows of many parts of the state have been covered with fine flocks.

All the varieties of fruit which ripen in the eastern and middle states, are found to flourish luxuriantly in Michigan. Many plants and fruits which belong to much lower latitudes, are either found growing here naturally, or are easily acclimated. It is an evidence of the mildness of the climate that the sweet potato and tobacco plant are cultivated successfully in many parts of the state. The apples, pears, and plums, produced by the orchards upon Detroit river, though little pains have been taken in their cultivation, are not surpassed for flavor and vigor in any part of the world. Peaches are raised in great perfection throughout the state, though liable occasionally to be cut off by late frosts in spring.

Pine and oak lumber constitute a large and increasing article of export. Ohio and Illinois are principally supplied from this source, and a hundred millions of feet are annually exported to all the neighboring states, and to New-York.

The extensive coasts abound with fisheries of white fish and salmon trout, esteemed the finest of fresh water fish, and which constitute a valuable item of export.

The lower peninsula of Michigan is very generally surrounded by a belt of timbered lands, embracing the greater part of the border counties. On the eastern side this tract rises gradually from the water, presenting a somewhat level surface, and is frequently flat and wet. On the western side the surface is more broken, and the soil more gravelly and dry. Throughout a large portion of the interior, and occasionally amid these timbered tracts, occur openings and plains, with some small prairies.

If the above remarks are favorably received, I propose in two succeeding communications, to describe these two classes of lands, into which Michigan may be considered as mainly divided, viz., oak openings, and timbered lands. **BELA HUBBARD.**

Detroit, May 4, 1847.

A RURAL PICTURE.

(*By* MICHAEL BRUCE—*published in* 1770.)

Now sober Industry, illustrions power!
Hath raised the peaceful cottage, calm abode
Of innocence and joy: now, sweating, guides
The shining plowshare; tames the stubborn soil
Leads the long drain along the unfertile marsh;
Bids the bleak hill with vernal verdure bloom,
The haunt of flocks; and clothes the barren heath
With waving harvests and the golden grain.

Fair from his hand behold the village rise,
In rural pride, 'mong intermingled trees!
Above whose aged tops the joyful swains,
At even-tide descending from the hill,
With eye enamoured, mark the many wreaths
Of pillared smoke, high curling to the clouds.
The streets resound with Labor's various voice,
Who whistles at his work. Gay on the green,
Young blooming boys, and girls with golden hair,
Trip, nimble-footed, wanton in their play,
The village hope. All in a reverend row,
Their grey-haired grandsires, sitting in the sun,
Before the gate, and leaning on the staff,
The well-remembered stories of their youth
Recount, and shake their aged locks with joy.

How fair a prospect rises to the eye,
Where beauty vies in all her vernal forms,
For ever pleasant, and for ever new!
Swells the exulting thought, expands the soul,
Drowning each ruder care: a blooming train
Of bright ideas rushes on the mind,
Imagination rouses at the scene;
And backward, through the gloom of ages past,
Beholds Arcadia, like a rural queen,
Encircled with her swains and rosy nymphs,
The mazy dance conducting on the green.
Fat on the plain, and mountain's sunny side,
Large droves of oxen, and the fleecy flocks,
Feed undisturbed; and fill the echoing air
With music grateful to the master's ear,
The traveller stops, and gazes round and round
O'er all the scenes that animate his heart
With mirth and music. Even the mendicant,
Bowbent with age, that on the old gray stone,
Sole sitting, suns him in the public way,
Feels his heart leap, and to himself he sings.

THE FARMER'S NOTE BOOK.

Fence Posts.—Some ten years since, I introduced into this place, a kind of fence posts then new here, which are becoming pretty generally in use in this vicinity, for door-yard fences, and which, economy and durability considered, are believed to be among the best. I have thought that a description of it might be useful to some of the readers of the "Cultivator."

It is formed by taking a stone 2½ feet long, 12 or 15 inches wide, 4 to 6 inches thick. A hole is drilled, 2 inches deep, about 5 inches from the front end, to admit a dowel, and one 20 inches from the first for the foot of a brace. A piece of scantling, 4 or 5 inches square, of a length to correspond with the height of the fence, is placed upon the stone and connected with it by a short dowel, and secured by a brace formed of half-inch round iron. Melted lead or brimstone will secure the end of the brace inserted in the stone, and a two inch wood screw or spike that connected with the post. The brace should form an angle of about 45 degrees. Where a gate is wanted, it is well to have one stone sufficiently large for both gate-posts. A small piece of iron resembling a screw-nut, should be placed on the dowel, between the end of the post and the stone, that the post may be kept dry. The posts being thus kept from the ground, and well painted, their durability will be apparent to all. Another advantage is, especially on clay soils, the fence will keep its position much better than where posts are placed in the ground. If the stone are well levelled and bedded in the first place, the fence will remain perfectly straight year after year,—the frost not affecting them in the least, excepting a few days in the spring when the ground is thawing. Should a close board fence be wanted, it would be best, perhaps, to have the stone somewhat larger, and the braces a little longer; but for ordinary open fences, those above described will be found sufficiently large. **Geo. Hapgood.** *Warren, Ohio, June* 22, 1847. ......

Thorough Preparation of the Soil for Crops.—I notice an article in your June number on the value of thorough preparation of ground for crops. I will make a remark, that one extra full working of ground, is worth at least 20 loads of common farm-yard manure, say 200 bushels per acre; (bushels are my choice in regulating manure on land, over loads;) and I think two extra plowings, if well done, worth 400 bushels manure. I do not at this time, remember ever to have seen land that was properly prepared, much injured with the usual mishaps of the farmer. What I call a full preparation for wheat, is to plow your land as *shoal* as you can, say from two to four inches; then pack with a roller, and after remaining in that state for some two or three weeks, to harrow well, say two, three, or five times in a place, according to the quantity of grass on the sod turned down; then in a week, to give a *cross plowing*, which is to go full as deep as the first; then harrow with large teeth as deep as you can; drive them in the ground seven or eight inches. My object is, never to expose over 1½ to 4 inches of the earth to the action of sun and air, unless you allow me a large amount of manure, when I would go deeper. Just before sowing my crop, I like another plowing. I have some eight or ten acres of land, which I worked two years in wheat, and neither year was the preparation such as I liked; and last fall, I determined to use every effort to have it prepared, and I worked it fourteen times; and this crop is the best of the three, so far, save about one and a half or two acres, which is of a heavy nature, and I did not get it so well water furrowed as I had it the first year. This time three years, on one edge of this cut, I put six or eight loads, (with extra sides to the cart—36 to 40 bushels,) of the rough manure from my barn-yard, and spread it on the grass. Farmers coming into the field, wanted to know the cause of the grass being better there than on the the adjoining land. The manure then applied covered 12 corn lands, say 4 feet wide, and some 300 or 400 long. After the ground was plowed for wheat, I manured all alike; plainly to the row did that coarse stuff show, and still shows in this crop, which has fixed me in the use of such manure. I have some eight or nine acres dressed as above, for wheat this fall. **M. Goldsborough.** *Trappe, Md., June* 10, 1847. ....

Draining.—With reference to draining in soils abounding with ferruginous matter, (alluded to at p. 111 of the present volume,) in the south of England it was found that when sea beach, that is, gravel from the sea shore, was used for filling up the drains, they did their duty, but either stones or chalk used for the same purpose, would be cemented into a mass, and close them.

Poultry.—I frequently see remarks on poultry. I fancied in the old country, that I had discovered hens to save early and late broods of chickens, and I remember having 76 of the size of pigeons, in the month of October, besides innumerable others for the small stock of a dozen hens. In the old country, however, the hens breed three, and not unfrequently four times yearly. Moulting time commences in England about the second week in July. I was therefore particular to have the early broods strong enough to bear the loss of their feathers; later broods I was careful should not be hatched until about the 14th July, that they might escape the penalty of moulting. I never lost any in the fall of the year at blackberry time, when numbers die off, it is said, from eating this fruit. I, however, attributed the loss of chickens to their moulting. I seldom lost any from the gapes. When I did, I had invariably detected them previously straying into the geese pen. In the manure of these birds, a small green worm generates, which I considered as poison to the young chicken, and one cause of the gapes.

In kept in open yard, fenced against ingress, having a shed and plenty of water at command. In farm-yard manure, immense quantities of small red worms generate, which are easily accessible to chickens. I set the hens at liberty from the coops in a few days, but they had to be watched from wandering, fed sparingly with wheat scraps, frequently only twice daily, for when insects and worms are plentiful the chickens will feed themselves, and I had no difficulty in raising a large stock. I attributed my success to watching the moulting time, and keeping the chickens when young from the geese pen.

Hemlock Offensive to Vermin.—I believe it would be found that hemlock timber, if used for granaries, &c., would not be infested with rats and mice; the wood being hateful to them.

Liming Land.—The application of lime to land, as described by Mr. **Haines**, (p. 175,) as being practised in Morris Co., N. J., so exactly assimilates to that of some of the midland counties in England, that I would have fancied that Mr. H. had been a Severn-side farmer. Fifty bushels of lime per acre, and no more, may sound as being a small quantity, when applied at twice, to produce lasting benefit to land, since we know that other quanities may be laid on *ad libitum*. To account for this difference, it may be sufficient to notice that in all probability, the lime of Morris county is made from the *manganese* rock. The only article on the manganese lime that I remember perusing, was a pretty long one in "Marshall's Midland Counties," I think, in describing the husbandry of Derbyshire.

SUBSOIL PLOWING, p. 196.—I have invariably noticed that in sinking wells, a stratum of blue marl, of the thickness of two or three feet, is met with above the springs. Might not Mr. GILLET be indebted to the marl for his 22 inch corn. Would he test the earth with an acid, to ascertain if it were so? A. M. *Toronto, C. W., June,* 1847.

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FISH FOR MANURE.—J. G. CHADSEY, obtained a premium of the Rhode Island Society for the Encouragement of Domestic Industry, for a series of experiments in relation to the use of fish as manure. He states that he has used fish for this purpose eight years in succession, with the exception of one year. His mode of using them is by making them into a compost with muck and soil. For field crops, he allows five barrels of fish to a cord. For roots, he adds to the heap ashes and rock-weed. One spring, when digging over his compost, he mixed two casks of lime with a part of the heap, and tried it by the side of that which contained no lime. No difference was perceptible in the crop the first season, but he thought the lime "showed itself" the second season. The application of fish in a "green state" to the surface of grass land, he does not approve, believing it to be a wasteful method, "as the atmosphere gets more than the soil," and the effluvia is very annoying to the neighborhood. Both wet and dry soils, he says are benefitted by the fish compost, but he applies it mostly to dry lands. He states, however, that it is quick in its action, and of short duration. He proved this by an experiment. In 1840, he divided a piece of land into two equal parts; on one part he put eight cords of fish compost per acre; on the other part he put an equal quantity of stable and hog-pen manure, mixed together, plowing in the manure on both parts. The two lots were planted to potatoes. At harvest, the crop was judged to be fifteen per cent. best where the fish compost was used, and the potatoes were also fairer and better. After the crop was dug, he sowed the lots to rye and grass-seed, without manure, and in 1841 he harvested over thirty bushels per acre; but the crop was judged to be twenty-five per cent. the best on the portion manured with the fish compost. In 1842, the scale began to turn. The two lots were in clover and herds-grass, (timothy,) but the crop was in favor of the stable and hog-pen manure by fifteen per cent., and the two following years the part to which the fish compost had been applied, produced scarcely anything but sorrel, the clover and grass being nearly all dead, while the other part continued to produce good crops of hay. In 1845, he broke up the field and planted it to corn; the whole being manured alike; the crop ten per cent. best on the part where the stable and hog-pen manure had been put. The next year, 1846, the field was planted to potatoes, and the yield was alike on the two portions. From this experiment, extending through six years, he concludes that fish manure, though highly valuable from its cheapness and fertilizing effects, is chiefly absorbed by the first crop, and does not affect the soil after the third year from its application.

It may be proper to remark that the fish alluded to are a species caught in immense numbers along the shores of Buzzard's Bay, Long Island Sound, and perhaps other places. They are not considered of any value except for manure.

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INFLUENCE OF THE RHUBARB PLANT IN PRODUCING GRAVEL.—The fourteenth number of Braithwaite's Retrospect of Practical Medicine and Surgery, contains an article on this subject which is calculated to alarm those who indulge in the pies and tarts made of this palateable plant. It seems that it furnishes the material of one of the most painful and dangerous diseases to which the human system is subject.

The substance of the article is briefly this:—The young stalks of rhubarb contain oxalic acid, and hard water contains lime; and consequently those who eat articles of food made of the plant, and drink such water, are introducing into their system the constituent ingredients of the mulberry calculus, which is an oxalate of lime; and if they are dyspeptic, and unable to digest the acid, "are very likely indeed to incur the pain and the exceeding peril of a renal concretion of that kind." "The oxalate was found in three out of four after eating the rhubarb."

This, it must be admitted, is rather startling. The mulberry calculus is the most painful form of the concretion of the kidneys and bladder. The rhubarb plant has come into extensive use, and is generally considered a very wholesome article of diet. If the danger of using it is as great as is represented in the Retrospect, it should be universally known. Indeed, there would seem to be reason to infer that the danger is not confined to those who use limestone water, for the acid will probably combine with other bases as well as with lime. The presence of oxalic acid in the plant, perceptible to the taste, would lead one to conclude, *a priori*, that the ascribed effect would result from its use, whenever it is not decomposed by the stomach, which seems to be the case in the greater proportion of instances; and the experiments leave little room to doubt its agency in the production of oxalate gravel in the urine. J. G. C. *York, Pa., June,* 1847.

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FIXING AMMONIA.—The May number of your excellent periodical is before me, but contains no explanation of the "apparent discrepancy," noticed in your April paper, under the head of fixing ammonia. Lest so interesting a matter should pass unheeded, I will venture an illustration. Gypsum is not, as your correspondent supposes, a super-sulphate, but is strictly a neutral salt. The table he quotes, was propounded by Geoffry, an old chemist, and was suggested by the fact that a combination of any of those bases (alkalies or earths) with sulphuric acid, is decomposed by the addition of any base occurring before it in the table.

To be fully understood, I copy the table "of the affinity which certain bodies have for sulphuric acid," viz:—

Sulphuric acid.—1. Barytes; 2. Strontia; 3. Potassa; 4. Soda; 5. Lime; 6. Magnesia; 7. Ammonia.

Now, if we add magnesia to a solution of sulphate of ammonia, the magnesia combines with the sulphuric acid, and the ammonia is set free. Lime, again, will take the acid from magnesia, and baryta will surmount all other affinity to obtain the acid.

"But it is now known," says Dr. Draper, in his Text-Book of Chemistry, pp. 167 and 168; that these tables are far from exhibiting the order of affinities; a weaker affinity often overcomes a stronger, by reason of the intervention of disturbing extraneous causes; and tables so constructed, lead, therefore, to contradictory conclusions. Some very simple considerations may illustrate this. Potassium, (the metallic base of potash,) can take oxygen from carbon at low temperatures, or in other words, decompose carbonic acid gas, but it by no means follows that the affinity of potassium for oxygen is greater than that of carbon, and accordingly we find that at higher temperatures carbon can take oxygen from potassium. Indeed, under the influence of heat, light and electricity, we find all kinds of chemical changes going on; and in the same manner the condition of form exerts a remarkable influence in these respects, so that cohesion and elasticity may be placed among the predisposing causes producing chemical results. If a number of bodies exist in solution together, they will at once arrange themselves in such a way under the influence of cohesion as to produce insoluble precipitates, if that be possible; or, under the influence of electricity, to determine the evolution of a gas. We have, therefore, no true measure of affinity, for the relation of bodies changes in this respect with external conditions, and the tables of Geoffry are only tables of the order of decomposition, and not of the order of affinity." Certain phenomena observed by chemists tend to show that when a number of salts, as for example, sulphate of lime, (gypsum,) and carbonate of ammonia are dissolved together in water, there occurs a division of each acid between the two bases, and of each base between the two acids, so that at first there exists in solution sulphate of lime, sulphate of ammonia, and carbonate of ammonia, while carbonate of lime being nearly insoluble, separates. But the carbonic acid attracts a new portion of lime to keep up the division; this it must obtain from the gypsum, its acid in turn combining with the ammonia; the carbonate of lime separates, and thus the process goes on till all the lime is converted into carbonate, and the ammonia into sulphate.

It is quite probable that all the beneficial effects of gypsum cannot be ascribed to its power of fixing ammonia, as it in many instances serves directly for the food of plants; and also exerts some influence on the mechanical texture of the soil. According to Dr. Fresenius, certain salts, as sal-ammoniac, glauber salts, (sulphate of soda,) and common salt, render gypsum more soluble than it is alone, probably from the decomposition of a portion of it, and the formation of more soluble compounds, according to the principle of the distribution of acids and bases. Since one part of gypsum requires 430 parts of water for solution, its application may not be beneficial to a great extent in dry situations; from this, also, results its durability as a manure.

It is obvious that upon soils which are already supplied by nature, its further application would be injudicious.

The *fact* that gypsum acts effectually in fixing ammonia, may be rendered evident by comparing the odor of two vessels containing urine, (into one of which a portion of gypsum has been introduced,) that have been allowed to stand exposed to the air for several days.

When the spirit of inquiry and trust that animates your correspondent, pervades the whole mass of the agricultural community, dissipating prejudice and willing ignorance, then it may be expected that science "will do her perfect work;" and what perfection may we not anticipate from enlightened practice under her auspices?

In conclusion, I would recommend for the study of every farmer, some elementary work on chemistry, of a *good character*, as Dr. Draper's—price 75 cts; or B. Silliman's jr.,—price $1.00. S. W. Johnson. *Deer River, N. Y., May* 9, 1847.

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Osage Orange.—Under this head, in the May number of the Cultivator, you say—"How it may stand the winters of this latitude we are unable to say, but deem it well worth a trial, being confident that it will answer admirably if it should prove sufficiently hardy." About ten years since I planted some seeds of the Osage Orange in rather an unfavorable situation. A few plants came up; for two or three years their growth was very little. They were afterwards removed to a more favorable location, when they improved rapidly, throwing out lateral shoots in great abundance. Some winters the trees were affected by frost; others they were not; whether owing to the climate, or the luxuriant growth of the tree, I am unable to determine; but enough survived every winter to answer the purposes of hedging. A shoot of the last year's growth measures more than eleven feet in length. G. S. *Erie, Pa., May* 21, 1847.

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Osage Orange for Hedges.—I see by the May number of the Cultivator, that some of your citizens have got on seed of the Osage Orange, for experiment. Three years ago I procured some of the seed, and planted it without any preparation other than preparing the ground, (a sandy loam,) and putting it in, in good condition to produce any vegetable production. That season, (three years ago,) was very dry here. The seed did not germinate, but lay in the ground until the following year; and then I believe almost every seed came up, and grew vigorously. The plants stood the following winter well. None of them were injured by the following winter, (which was a very severe one,) except a few inches of a second growth, which started late in the fall. For hedges, this would rather be an advantage than otherwise; as it would tend to make the hedge more compact, without the trouble of pruning. This last winter, none of the young trees suffered more by our climate than an apple tree; and the growth being quite equal to that of a young apple tree, both in the nursery and the few I set out. I therefore conclude, as far as I have had experience with the Osage Orange, that it will bear the climate of the north as well as the apple. Whether it will bear fruit is yet to be known. To form a hedge, I judge it would be as well, if not better, to plant the seeds, keeping them clean, where they are wanted for the hedge, as I find them a very troublesome article to transplant. The thorns on them are very numerous and very sharp. D. Minis. *Beaver, Pa.*, 1847.

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Sheep Husbandry in Virginia.—I see a communication in the June number of the Cultivator, in relation to the agricultural advantages of Nelson Co., Va., signed "Nelson." Among other things mentioned, he speaks of the adaptation of that section of country to the growing of fine wool, upon the authority of Samuel Patterson, Esq., of Washington Co., Pa. If "Nelson" will cross the mountain into the adjoining county of Augusta, he will there find a flock of pure Merinos, brought from Vermont, which have been living and thriving for the last two years as well, probably, as they ever did at the North. No disease has ever been seen among them. This season, the whole flock, (94,) a large proportion lambs, averaged within a fraction of 5 lbs. clean wool per head. One two year old ram sheared 9 lbs. 4 oz. This flock have had no extra keep, yet they have been fat the year round. This is proof by experience, that this part of Virginia is well adapted to the growing of fine wool. I have paid some attention to the subject during the last four years, having travelled considerably in the southern and southwestern states, (not by steamboat or steamcar,) but on horseback, and never have, in my opinion seen a country better fitted by nature for sheep husbandry than this section of Virginia. The greatest drawback here, is the destruction of sheep by the numberless hordes of worthless cur dogs, (kept generally by worthless men,) which go prowling about the country seeking what they may devour. I hope that means will be used, when the next census is being taken, to ascertain the number of sheep annually lost in this state by dogs, and their value. It will, I have no doubt, astonish the natives. AUGUSTA.

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PROPER CONSTRUCTION OF LIGHTNING RODS. – As the season is fast approaching in which large quantities of hay and grain are to be stored, I wish to call the attention of your numerous readers to the importance of protecting their barns by lightning rods.

It is well known that the warm vapor arising from newly filled barns, has a strong affinity for electricity, and on the near approach of a thunder cloud, places such buildings in imminent danger; but a prejudice has arisen against the use of conductors, from the improper manner in which they have generally been constructed. When not rightly made and put up, they are of no value. In many cases they may be even worse than useless. For instance, if the points at the upper extremity are covered with rust, they will not answer the purpose intended, because a metallic oxide *repels* instead of attracting electricity. If the lower end terminates before reaching the ground, or penetrates it but a short distance, the fluid is liable to escape from the rod into the side of the building, which being close at hand, offers a better conductor than the air, or the dry surface of the ground.

For the information of such as may not have given attention to this matter, I will give the method of making and attaching conductors, which has been tested by experiments, and approved by men of science.

They should be made of horse shoe rods, five-eighths inch square, which are sufficiently large, and being slit cold, have a rough jagged surface, affording numerous radiating points. The several pieces of which the rod is composed, may be welded smoothly together, so as not to increase the size, or joined by a hook and eye. In the last method, the hook should have a point left on the end, and be driven into the eye after being bent at little more than a right angle.

In applying the conductor to barns, begin at the northwest corner, by inserting the rod far enough into the ground to always insure its contact with moist earth; carry it along the gable end to one end of the ridge pole, thence along the ridge pole to the other end of it, thence along the other gable end, and down the southeast corner, continuing it *into* the ground, as in the beginning, far enough to reach the *moist* earth. There should be a point at the eaves on each corner, and one on each end of the ridge pole, which should be covered with a coating of silver to prevent them from rusting. The rod should be secured in its place by wooden fastenings. If these directions are carefully observed, there can be but little doubt that buildings thus provided would be effectually secured against destruction by lightning, with little trouble and at a small expense. W. *Meriden, N. H., June,* 1847.

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CANADA THISTLES.—Some persons suppose that this plant is only propagated by root, not from seed. The idea is unquestionably erroneous, and leads to a carelessness which permits the increase of the pest. It is true that it spreads rapidly by roots; but where it is seen to spring up, as it frequently does, at a considerable distance from where it had previously grown, it may be known to have sprung from seed. It should therefore be made a rule to prevent its seeding in all cases. We believe a law requiring the periodical cutting of Canada thistles on the public highways in this state, has for some time existed, and during the last session of the Legislature, an act was passed to "provide for the destruction of Canada thistles, and other noxious weeds on the banks of the canals, railroads, and turnpike roads." This act makes it the duty of the superintendents of canals, and the several railroad and turnpike corporations, to cause all the thistles and noxious plants growing on the sides of the canals, to the width owned by the state, and all those growing on lands belonging to the corporations, to be cut twice in each year—once between the fifteenth day of June and the first day of July, and once between the fifteenth day of August, and the first day of September. In case of the neglect of the officers to have this work performed as specified, it is provided that any person may cut the thistles, &c., within the time mentioned, and they shall be entitled to receive for the labor so performed, at the rate of one dollar per day, of the superintendents of the canals, or the several railroad companies.

In pastures and all grass grounds, thistles should be *mowed close to the ground* twice a year, just as they are in blossom, before any of them have seeded. The labor of cutting will in many cases be repaid by the extra quantity of feed which may be thus obtained. Thistles frequently occupy the best ground, and where they stand thickly, they prevent animals from eating the grass, which grows among them. By cutting them closely, the grass springs fresh and sweet, and the patches are grazed so much that the growth of the thistles is often much checked. On moist land, which is inclined to make a thick sward, thistles may be effectually smothered down and killed by following up the practice of cutting for a few years. We have formerly proved this in our own experience in repeated instances.

In cultivated land, the Canada thistle may be destroyed by frequent plowing. Four thorough plowings, with an interval of three weeks, between each plowing, will destroy the principal portion of them. In a late excursion to the westerly part of the state, we were informed by several farmers that they had pursued this course with advantage. Among others we may name DAVID THOMAS, Aurora, G. V. SACKETT, Seneca Falls, JOHN JOHNSTON, near Geneva, and D M. ELLIS, Onondaga Hill. Mr. ELLIS showed us a field which a few years ago was completely overrun with Canada thistles. He plowed it in June, after the thistles had got considerably started, and as soon as the sod was pretty well rotted and the thistles had shot through the furrows for a second growth, he plowed it a second time, and so a third time, frequently harrowing in the interim between the plowings. This field was sowed to wheat, and scarcely a thistle appeared in the crop. It is now in pasture, and but very few thistles have yet shown themselves.

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MEASURING HAY.—On page 214 of the Cultivator for July, I find a communication signed H. A. P., giving a rule for measuring hay in the mow or stack, and stating that the writer had verified its general accuracy, and had both bought and sold by it. He says—"if the hay be somewhat settled, ten solid yards will make a ton. Clover will take from eleven to twelve yards for a ton." I think there must be a mistake somewhere. The box of an ordinary wagon contains one solid yard, and ten of such boxes piled one on the other, would be more than ten solid yards, but would make but a small quantity of hay for a ton. It was this view of the subject which first struck me on reading the article, and if I be correct, your correspondent H. A. P. must be wrong, and as this is one of those rules that do not work both ways, being a very good one for the seller, but bad for the buyer of hay, it will be well if there be a mistake, to correct it. A SUBSCRIBER.

[Perhaps we should have added a brief note to H. A. P.'s article in the July number. His rule for measuring hay is one which we have never tried, and cannot say whether it is correct or not. The rule which we have formerly followed, in some instances, was 400 solid or cubic feet to the ton of hay in the mow. This would give nearly fifteen square yards, (instead of ten,) to the ton. But it is obvious that no *invariable* rule can be adopted in such a case, so much depending on the amount of pressure which the hay may have received, or its susceptibility of being reduced to a small compass.—Eds.]

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Hydraulic Ram.—I notice in the June Cultivator, a partial description of Messrs. Farnham, Brown & Co.'s Hydraulic Ram. I wish to make some inquiries of you in regard to the machine. In the first place, I live about 75 feet above, and about as many rods from the pond of water that I wish to use. I can have from five to twelve feet fall, and I should like your opinion about the machine affording me a stream of water, and whether it would be liable to freeze up in winter, here amongst the Green Mountains; and whether I can carry the water in pine logs, and how long the machine will be warranted to operate. E. H. Weeks.

[We publish the above in the hope that Messrs. F. & B., or some one else, will furnish the information called for.—Eds.]

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Horse Rake.—It is well, Messrs. Editors, to preserve the memento of implements useful to the farmer, and as the farmers of America have profited largely by the advantages derived from the horse rake, I deem it but justice to the inventor, a poor son of Africa, to treasure up its history.

A *black man*, who lived in Hempstead Plains, Long Island, says the Farmer's Cabinet, invented the horse rake. He died in 1821. It was first introduced into Pennsylvania in 1812. The first one was *destroyed* by a malicious person, who feared its innovating effects on the price of labor. It is now becoming universal, and many a patent instrument is to be found, while the inventor is forgotten. It saves at least one half of the expense in gathering the hay. Let Africa's son have the credit. Surely the farmers of America will not be unwilling to award credit where it belongs. H.

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The Influence of the Barberry, and the Doctrine of Transmutation.—We trust our friend the writer, will pardon us for giving publicity to the following extract from a private letter:

"The barberry was out of flower a fortnight to three weeks before our wheat came into bloom. I have never yet seen the man or writer, who could give any satisfactory reason why the barberry should blast wheat; yet Sir John Sinclair believed in the notion, being misled, if I remember right, by one of his scientific friends; and it is sad to think that science should be perverted to such purposes. In the June number of the Genesee Farmer, however, at page 137, we have two extracts from a very learned work, and no less a name than that of Dr. Lindley, of London, is given as authority for the transmutation of *oats into rye!* Dr. Lindley ought to be high authority, but great men are not always wise. Even Linnæus himself believed in the annual submersion of swallows! and many celebrated men have been equally credulous.

"People generally believe too much; and I shall not be misunderstood when I comprise all superstitious folks in this class. I have thought that farmers occupied a conspicuous place in this legion; but it is so much easier to believe—to take a thing for certain—than to observe and to reason; that thousands, like a flock of sheep following a bell-wether, wander in the devious wilds of error. And when once fairly within the enclosure, how unwilling they are to have old prejudices disturbed, and how eagerly they catch at every straw that promises the least support!

E. S. Johnson, of Penfield, is the champion on this occasion, who comes forward in the garb of philosophy, to prove the doctrine of transmutation. A little more discernment, however, might have saved him from this trouble. The *second* extract, in my judgment, disproves the *first*. After telling us with great gravity, that if the stems of oats are cut down, "*invariably* rye is the crop reaped,"—he tells us with equal gravity, that Lord Hervey only got a very slender *barley, resembling rye*, a little *wheat*, and some *oats*! Not a word is said of the cleanness of the ground—of the impossibility that rye, wheat, or barley, could be accidently dropped there—or that any care was taken to prevent it. The mind that can be satisfied with experiments of this kind, must be in a deplorable condition; but yet not very dissimilar to what we have generally seen amongst the advocates of transmutation.

"When oats are thus turned into rye, *a thin crop only is produced*. What becomes of the rest of the oats? and by what magic process is some turned into barley and some into wheat? As Gideon B. Smith once remarked, 'Verily, we are making rapid advances *back* again to the darker ages.'

"During the long controversy on wheat turning into chess, several instances were stated by gentlemen of unimpeachable veracity, of farms and districts, where not a single stalk of chess was discovered among the wheat in many years—say 20, 30—and even longer periods. Now, one well established fact of this kind, is sufficient to outweigh the testimony of a thousand Dr Lindleys, where the more careless the experimenter in favor of transmutation, the more likely he is to succeed."

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Aroma of Plants—Inquiry.—Allow me to inquire whether the culture of aromatic plants in proximity, would have any effect on the innumerable insects that infest and often destroy our vegetation? The aroma of certain plants is obnoxious to most insects, evinced by their absence if not virtual destruction. Aside from this influence, may not the effete matter of the *protecting*, furnish direct support to the *protected* plant. An established principle in the "animal economy"—"the bane of one is food for another," would seem applicable to the vegetable. The fertilizing properties of certain plants for the growth of others in alternation, furnishes an apposite illustration.

Those broad-leaved and vigorous plants that live in quite different latitudes, may they not be properly juxta-posed in our orchards, vineyards, and nurseries? I am almost ready to ask, may not the "creeping ivy,"—the multiform parasitic vines that climb and even rise with the "proudest oak," be a source of sustenance and consequently a support, instead of an absolute dependant on their trellised upholders. D. T. Brown.

[It may be possible, that in some cases, noxious insects may be effectually repelled by the odors of plants—of which actual experiment would be only conclusive—but in most cases the remedy would be worse than the disease, as the amount of such plants required, would entrench largely on the space and soil needed for other purposes. It is very much to be questioned if any useful end would be thus attained, except in very extreme cases.

With regard to the aroma from plants affording nourishment to other plants, there is nothing in the known experience of horticulturists and of vegetable physiologists, nor in any theory based on fact, which strengthens such a supposition. The matter constituting aroma, is exceedingly small, and can contain but little of a fertilizing nature.]

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Laborer's Cottage—Sheep Rack.—The correspondent of the Cultivator over the letter "T.," will confer a favor by informing us, (through the same medium,) by what means the joists which support the chamber floor and partitions above are sustained, in the "laborer's cottage," figured and described in the January number? And also, in what part of the frame "braces" are employed, as it is observed that they are in the bill of timber. And also, will he give the distance or space between the slats of the "sheep rack," also figured and described in the March number, and by what means the hay is kept against the slats, and within reach of the sheep? W. R.

[The joists referred to were supported by thick strips of plank, spiked on the inside of the upright siding. We do not at this moment recollect any braces used in the building, except in connecting the rafters, to lath upon overhead.

The space between the slats of the sheep rack, is about six inches—or just wide enough for each sheep to thrust its head freely between, and thus enabled to reach the hay without difficulty, and by which means less is wasted than if drawn from the rack at each mouthful. Any carpenter may easily measure the thickness of a sheep's head, and act accordingly.]

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"The West."—The Prairie Farmer, commenting on a communication in the Maine Farmer, giving prices of lands and products "at the west," very properly asks, "Where is that?" The west is a pretty extensive term. It may include about 14 states, stretching from the northern extremity of Wisconsin, to the southern line of Texas, if anybody knows where that is, and it may include any extent of territory west of Mississippi to the Rocky Mountains; or, it may mean some little corner in one of the states, where the writer has a friend or correspondent.

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How much pork will a bushel of Corn Make? This is, no doubt, a hard question to answer, as so much depends on certain contingencies—such as the natural tendency of the hog to fatten, the manner in which the food is prepared, and the situation in which the animal is placed in regard to all the circumstances which promote the secretion of fat. An amount of food which would fatten an animal when placed in a dry and comfortable pen and fed from a clean trough, might be no more than adequate to the supply of the waste of the body, under an exposure to cold and wet, where quietude and comfort could not be enjoyed. Still an approximation may be made towards the settlement of this question. If a series of experiments could be made with hogs of the best breeds, placed in all respects in similar circumstances, both in regard to quantity and quality of food, shelter, and mode of feeding, a succession of results of similar character would no doubt in time be obtained, and they might be fairly taken as establishing for all practical purposes, the point involved in the question.

The committee to adjudge premiums on swine for the Essex County (Mass.) Agricultural Society, at the exhibition in 1846, in concluding their report, make some observations on the cost of making pork. They say—

"It is believed by your committee that pork can be raised for six cents a pound, when corn is sixty cents per bushel, at seven cents a pound when it is seventy cents per bushel, and so on, either way, one cent a pound on the pork, and ten cents a bushel on the corn. And this conclusion is drawn from the fact that a good thrifty hog, that will eat four quarts of corn a day, will gain a pound and a-half of pork a day."

According to the above rule, a quart of corn is equivalent to six ounces of pork, and a bushel is equivalent to twelve pounds. The committee do not state, (what is certainly very important,) whether the corn should be ground, and the meal given either raw or cooked, or whether the corn is to be fed whole in its raw state.

The committee, however, speak in regard to the utility of cooked food, especially apples for swine, as follows:

"Our own testimony would go strongly in favor of cooked food, and some of us are of opinion that if it be fermented it is all the better. Indeed, apples, sour or sweet, if boiled and mixed with meal are not only eagerly eaten by swine, but are nearly as promotive of their growth as potatoes managed in the same way. We have no question that this is the best use to which cider apples can be appropriated."

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"Big Head" in Horses.—The disease in horses called "big head," is sometimes very troublesome, both on account of the pain and injury it inflicts on the horse, and the difficulty of curing it. J. J. Rousseau, in the *Prairie Farmer*, gives an article descriptive of the disease and mode of cure. He says—"The first appearance of the big head, when it attacks the upper jaw, is more like that produced by the halter in breaking young horses than anything I can compare it to. Indeed so similar are the two that jockeys frequently trade off horses having incipient big head, stating that the appearances have been produced by a halter. The horse first loses that delicacy of proportion about the head which is one of his greatest ornaments, looking clumsy and awkward on account of the swelling which takes place first at or near the place where the noseband of the halter passes round the nose. The tumors are at first small and circumscribed, and may not be noticed by a careless observer. Their situation is on each side of the face at the place above indicated, and when they acquire their greatest size, they extend to the eyes, or thereabout, and their elevation will be one or two inches, and in bad cases more. The head now presents a peculiarly clumsy appearance. Frequently before the upper part of the head advances so far as just described, the affection seizes the lower jaw bone, which becomes much larger than natural."

The shoulder, also, he says, is liable to be attacked. It begins to swell at the points, from which it extends and embraces the whole scapula. But the disorder observes no regularity in its attack and progress. "Sometimes the face alone is affected; sometimes the lower jaw, and sometimes the head is last affected; the complaint beginning in the shoulder, and extending to the limbs, and finally to the head." In some cases it is said, the disorder does not extend to the head, and in such cases it is called the "stiff disorder," though the complaint is said to be the same, as is proved by its being cured with the same treatment. It appears to be known by the various names of "big-head," "big-jaw," "big-shoulder," and "stiff disorder," but the same treatment is recommended for all. The disease is divided into three stages. The first stage is known by stiffness in the limbs, lameness, &c. The second stage is shown by the enlargement of the head, jaw or shoulder. The third and last stage is shown by the protuberances on the head, having gained a considerable size and bony consistence. The treatment for the first and second stages is given as follows:

"1st. Apply a cord around the upper lip, put in a stitch and twist it so as to hold the horse still. This is a common operation and familiar to every farmer. Then cut through the skin on the middle of the nose, vertically, and immediately on the rounding part between the nostrils. Let the incision be no deeper than to expose the tendon which passes down in this place. Lay hold of the tendon and cut it in two; then cut it off again at the distance of about one inch, taking the piece entirely out. (The piece must be taken out, or the cut extremities would soon reunite.) Next, double one ear and excise about an inch from each cord—so with the other ear."

After the operations have been performed, it is recommended to turn the horse to grass, to give him no grain, and neither ride or drive him until he is well, which it is said will require several weeks, and it is recommended to give him on alternate days, a teaspoonful of salt-petre, and a tablespoonful of sulphur, for 9 or 10 days; bleeding him every two or three days in the course of that time.

In case the disease has reached the third stage before treatment is commenced, it is directed to "bore a gimblet-hole in each protuberant bone of the face, (one on each side,) and introduce into them a piece of arsenic the size of a pea, wrapped in tissue paper."

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Road Making.—I was gratified by your introducing the subject of roads to the notice of the readers of the Cultivator, and I like much the suggestions of Mr. Gillespie, in your quotations from his work on road making. We, at this place, need only to travel a few miles south, to the bounds of Pennsylvania, to see proofs of the advantages of the money tax system for road making and repairing, over the operations of our plan. Although the soil there is inferior to ours for roads, and the settlements newer and more scanty, there is a strikingly marked difference in the quality and condition of the roads in their favor.

I have long thought that a mode of taxation entirely different from any that I have known adopted, might be devised, which would secure the object more certainly and cheaply, and be less burdensome to the people. It should embrace the principle, as a main feature, that every parcel of real estate should support that portion of road which passes through and by it, and be, with suitable exceptions and qualifications, exempted from further taxation for such purposes. I think a system based on this principle might be perfected, so as to effect the following advantages: Every person owning real estate, would at once make his portion of the road in the best and most durable manner. They would feel that by this course, they would, as it were, relieve their estate from the payment of annual interest on a mortgage with which it was encumbered. He could perform his work when convenient, instead of doing it at the order of a captious overseer. He would do it as he does the work on his farm by full days' work, instead of wasting his time, as is commonly done in the present system. Besides, a commendable emulation would be excited among neighborhoods and individuals, which would insure excellence in their work.

I should think that a commissioner of highways (I would by no means have more than one,) should be elected in each town, to perform the ordinary duties of superintendents—seeing that all roads are constructed on one and an improved model, and kept in perfect order. He should also assess an equitable tax on all personal property in the town, a poll tax on all persons not exempt as above, and a tax on such real estate as is located in villages and other situations, in which no specific labor is needed. The money so raised to be applied to the construction and repairs of bridges, and to aid those persons who may be too heavily burdened by their portions of road. If this source of revenue should not prove sufficient for those purposes, he should have power to direct an appropriation by the board of supervisors, chargeable to the general account of the town.

I should think that all the commissioners of towns in a county, would form an appropriate board of appeal, from the decision of any one commissioner, in all cases of grievance, on the part of individuals, or of the town, with, perhaps, ultimate appeal to the board of supervisors. I do not presume that this sketch of a plan approaches a perfect one—perhaps you may think it chimerical. If so, I hope you or others will contrive a plan which will operate better than the present one, which almost entirely fails with us, though the highway tax bears a proportion to our town and county taxes, as six to fifteen. A. D. *Binghamton, July* 12, 1847.

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Successful Steep for Seeds.—Much has been said and written on the subject of soaking seeds in different preparations, for the purpose of promoting their rapid vegetation and growth. As far as I have heard or read, these experiments have proved that most of these solutions or preparations are nearly or quite worthless. I will, however, state a few facts in regard to one solution that I have tried for the last three seasons.

In the winter of 1845 I found, in the Philadelphia Saturday Courier I think, the following recipe—"Soak garden seed four hours in a solution of chloride of lime in the proportion of ¼oz. chlor. lime, to one gallon of water." The writer observes that seeds which were soaked thus, came up some days sooner than those which were not soaked, and that the plants kept the lead through the season.

The experiment being easily tried, I made up my mind to give it a fair trial, and see what the result would be. On the 10th of May, 1845, having my ground ready, beds made, hills all prepared, so that as little time as possible should be consumed in planting, I put cucumber, muskmelon, beet, summer savory and radish seeds, and corn, beans and peas into the solution, let them soak four hours, and planted immediately.—Twenty-four hours after planting, I dug up some of the corn and peas, and found that their roots were from one to one and a-half inches in length. In forty-eight hours the roots were three to four inches, and the spire one to one and a-half inches in length. The precise day that they broke ground I now forget.

My cucumbers and melons came up quick and well, and for the first time in my life, my beets were up before any weeds were started. In a garden adjoining mine, planted nine or ten days previous to mine, beans were just breaking the ground when mine were planted, yet mine passed them in a week my corn came up about the same time, and my peas came up first. Now as to the *moisture* merely, seeds lying in the ground eight or ten days would imbibe as much as they would by being soaked four hours. I have not marked the exact time of my seeds vegetating, since 1845. I know, however, that my seeds do not fail me as they used to do, and as my neighbor's very frequently do.

This year I did not plant my garden till the 17th of May. Everything that I soaked came up quick, so that my plants were altogether ahead of the weeds, and my cucumbers and melons have kept out of the reach of the bugs, while my neighbors have planted two, three, and four times. I have never seen any notice of this solution, except as above mentioned. Two or three of my neighbors have tried the experiment this year with the like good results. Bailey. *Binghamton*, 1847.

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Gluten in Wheat.—This valuable constituent in wheat, varies much in quantity with climate, and with the kind of manure. Wheat in warm climates has most gluten, often nearly one-half more. Equal portions of Cincinnati and of the best Alabama flour were made into bread, with the addition of equal portions of yeast. On baking, the bread from Cincinnati flour was found to be 33 per cent. heavier than the flour and yeast together; the Alabama flour had gained 55 per cent., in consequence of the larger quantity of gluten in the latter. Wheat manured with ox-blood and some other of the most powerful manures, was found to contain about three times as much gluten as with cow manure

AGRICULTURAL SOCIETIES.

NEW-YORK STATE AGRICULTURAL SOCIETY.

We publish below, a list of the Judges appointed by this Society, to award its prizes at its next Fair, at Saratoga Springs, on the 14th, 15th, and 16th days of next month.

Those who intend to compete for premiums should remember that all animals and articles must be ready for examination on the *first day* of the exhibition—that is, on the FOURTEENTH OF SEPTEMBER. The first day will be devoted exclusively to the examination by the judges, of the animals and articles exhibited, and *no persons* will be admitted within the enclosure on this day, but the officers of the Society, judges, and exhibitors.

At the last meeting of the Executive Committee, the PRESIDENT reported that he had, with the Secretary, visited Saratoga Springs during the past week, and was happy to inform the Committee that the citizens of Saratoga have organized their committees as requested by the Executive Committee at their last meeting; and that they are making arrangements for the erection of buildings and enclosing the grounds. Assurances were given that everything required would be in readiness for the approaching Fair of the Society.

The SECRETARY reported that he had, in pursuance of the directions of the Executive Committee, corresponded with the officers of the railroad companies, and that the usual facilities would be furnished to the Society at the Fair. Articles and stock for exhibition to be transported free. Visitors in special trains, at half the usual fare. Officers of the Society to be carried to and from the Fair in any of the trains at the same rates.

AWARDING COMMITTEES.

On Durham Cattle.—Effingham Lawrence, Flushing, Long Island, Henry Holmes, Washington; Thomas Hollis, Otsego.

On Herefords, Devons, and Ayrshires.—Lemuel Hurlbut, Winchester, Ct.; Frederick Ingersoll, Oneida; Thomas Bell, Westchester.

Cross-Improved and Native.—Richard Griswold, Lyme, Conn.; Wm. Fuller, Skaneateles; John Budd, Greene Co.

Working Oxen.—Sanford Howard, Albany; Joseph Bennett, Otsego; Hiram Clift, Onondaga.

Steers.—John Boies, Homer; J. B. Dill, Auburn; Julius Curtis, Oneida.

Fat Cattle.—Hiram Slocum, Troy; Thomas Devoe, New-York; Lester Barker, Oneida.

Milch Cows.—Newbury Bronson, Wyoming; John Bathgate, Morrisania; Elias Cost, Ontario.

Horses, Class 1 and 2.—Hon. Adam Ferguson, Canada West; Theodore S. Faxton, Oneida; A W. Clark, Jefferson.

Blood Horses.—Charles Henry Hall, Harlem; John T. Cooper, Albany; Alexander O. Spencer, Wayne.

Matched Horses and Geldings.—Silas K. Stow, Troy; W. S. Stoutenbergh, Coxsackie; Barent P. Staats, Albany.

Long Wooled Sheep.—Edward Hallock, Ulster; L. D. Clift, Putnam: Thomas Dunn, Albany.

Middle Wooled Sheep—Francis M. Rotch, Otsego county; S. Wait, Jr., Orange; Henry Mesier, Dutchess.

Merinos.—Henry G. Taintor, Hampton, Conn.; Robert L. Rose, Ontario; J. L. Randall, Onondaga.

Saxons.—James M. Ellis, Onondaga; S. C. Scoville, Salisbury, Conn.; M. Y. Tilden, Columbia.

Swine.—Henry Rhodes, Oneida county; Martin Springer, Renselaer: Wm. Howard, Cayuga.

Poultry.—H. A. Field, New-York; F. C. Moses, Onondaga; Mr. Potter, New-York.

Plows.—John S. Gould, Columbia county; Edwin N. Hubbell, Greene; Morgan L. Brainerd, Oneida.

Wagons, Harrows, &c.—W. H. McCulloch, Greenbush; Matthias P. Coons, Rensselaer; Richard Van Dyke, jr., Greene.

Farm Implements, &c.—T. A. Burrall, Ontario county; Benj. N. Huntington, Oneida; Hart Massey, Jefferson.

Plowing Match.—John McDonald, Washington county; Isaac Tallmadge, Rensselaer; Joseph Ball, Otsego; Leonard Bronk, Greene; Hiram Mills, Lewis.

Butter.—Israel Denio, Oneida county; Washington Putnam, Saratoga; John Bloom, Albany.

Cheese.—Joseph Carey, Albany; Joel Woodworth, Jefferson; Joel Root, Saratoga.

Sugar.—Robert McDonnell, Saratoga; George Tuckerman, Otsego: James M. Cook, Ballston Spa.

Silk.—Ebenezer Proudfit, Rensselaer; James Clark, Hudson; Henry Carpenter, Albany.

Domestic Manufactures.—Orville Hungerford, Jefferson; Le Grand B. Cannon, Rensselaer; W. J. Gilchrist, Saratoga; Edward Wells, Montgomery; John Van Duzen, jr., Columbia.

Needle Work, &c.—Mrs. Lebbeus Booth, Ballston; Mrs. Miles Beach, Saratoga Springs; Mrs. M. Harvey, Salem; Mrs. Henry Holmes, Union Village; Mrs Wm A. Beach, Saratoga Springs: Mrs. Samuel Young, Ballston. John J. Viele, Esq., Troy, Secretary to committee.

Flowers.—Dr. Herman Wendell, Albany; W. R. Randall, Cortland; J. W. Bissell, Monroe; James R. Westcott, Saratoga;

Ladies.—Mrs. E. C. Delavan, Ballston; Mrs. E. Huntington, Rome; Mrs. Huntsman, Flushing; Mrs. Dr. O'Toole, Washington, D. C.; Mrs. L. Tucker, Albany; Mrs. Margaret Conkling, Melrose, near Auburn.

Vegetables.—Thomas Bridgeman, New-York; R. Harper, Albany; David Gray, Utica.

Miscellaneous Articles.—E. P. Prentice, Albany; Joshua Atwater, Greene; Ransom Cook, Saratoga.

Fruits.—Lewis F. Allen, Erie; Samuel Young, Saratoga; Roswell Reed, Greene.

Paintings and Drawings.—J. J. Thomas, Wayne; W. W. Forsyth, Albany; O. D. Grosvenor, Oneida.

Stoves, &c.—Pomeroy Jones, Oneida; Edward Fitch, Saratoga; Asa Fitch, M. D. Washington.

Discretionary.—Orville Clarke, Washington; Joel Rathbone, Albany; W. L. F. Warren, Saratoga; A. L. Linn, Schenectady; George Griffing, Greene.

Foreign Stock—Horses.—James D. Wasson, Albany; Ela Merriam, Lewis; Dr. Carrington, Farmington, Ct.

Cattle.—Horatio Sargeant, Springfield, Mass.; Ira S. Hitchcock, Oneida; E. P. Beck, Wyoming.

Sheep—Stephen Batty, Washington county; John Murdock, Monroe; Samuel H. Church, Oneida.

COMMITTEE OF ARRANGEMENTS.—Geo. Vail, Troy; B. P. Johnson, Albany; T. J. Marvin, W. A. Beach, J. T. Blanchard, J. A. Corey, Saratoga Springs; Samuel Cheever, Bemis Heights.

COMMITTEE OF RECEPTION.—Hon. R. H. Walworth, Saratoga; Samuel Young, Ballston; John A. King, Jamaica; E. C. Delavan, Ballston; T. J. Marvin, G. M. Davison, J. H. Corey, Saratoga Sp's.

The NEW HAVEN COUNTY (CT.) Society is to hold its next exhibition at Waterbury, on the 6th of October. Efforts for a large display are being made.

JEFFERSON COUNTY, N. Y. The annual Fair is to be at Watertown on the 9th and 10th of September. The address is to be delivered by Dr. LEE, editor of the *Genesee Farmer*.

CULTIVATION OF CEREAL GRAINS IN COLD CLIMATES.—In *Silliman's Journal*, there is a notice of a paper recently published in St. Petersburgh, on the culture of grain in high latitudes, by M. KUPFFER. It is stated that in the north of Russia, near Nertchinsk, where the mean temperature is about 26 degrees F., all the cereal grains are cultivated with success, especially summer rye and barley, although there are only two months and a half, or at most three months, between plowing and harvest. In the same fields, he found by digging, that the soil was completely frozen at a depth of seven feet, and so hard that a crow-bar was required to turn it up. This was on a hot day near the middle of the month of August. The depth to which the ground is frozen in high latitudes is surprising; thus it is stated that in penetrating the earth near the place above mentioned, to the depth of 175 feet, not a drop of water was found; all was frozen.

PAINTING BRICK BUILDINGS.—A cheap and good way of painting brick buildings is given by T. Hudson, a correspondent of the Prairie Farmer. He states that he has seen buildings thus painted 12 or 15 years ago, the color remaining as bright as when first put on. Slack fresh burnt lime, as for whitewash, and add Venetian red to give it the desired color. Apply it with a whitewash brush, in dry, hot weather. Two coats are sufficient. Then with a chalk line lay off the joints in the brick, and pencil those lines with whitewash or white paint, the former proving most durable. Salt, glue, or skim milk are said to improve this paint or wash, but are not essential.

IMPROVEMENT IN CATTLE.—The American Herd Book states on the authority of Youatt, that the average weight of cattle at the Smithfield market, London, in 1710, was only 370 lbs. each. In 1795, the average was 462 lbs. In 1830, the average weight had increased to 656 lbs. each. Formerly, the average age of the fat cattle was five years; now, only four years.

DOMESTIC ECONOMY.

Glass Milk Pans.—A lady of my acquaintance will insist that more cream will come on milk in a glass than in an earthen basin, before the milk sours; and that milk put in a glass vessel becomes very thin and poor. Every effect must have its cause; but I can account for this, if it is true, in no other way than this. Most bodies have a current of electricity passing through them—that glass is among the few non-conductors of electricity, and therefore, the milk being separated from this general flow, is allowed longer to remain uninfluenced by galvanic action than if it were in a basin of electric conducting material.

It is a well known fact that heavy thunder and lightning tends to curdle milk very soon; wherefore I conclude that this accounts for the lady's wonderful discovery, if it is discovered. T. G. *Livingston, La.*

[Glass milk pans have been considerably introduced in England, and are well liked. It is often said that they preserve the milk unchanged for a longer time than other pans. We have never used them, and cannot, therefore, say whether this is so. It is generally admitted that milk sours rapidly during thunder showers; but whether this effect is owing to the agitation of the milk, or to electrical currents, we will not attempt to decide.—Eds.]

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Premium Offered.—Bread has been called the *staff of life;* and upon the quality of it depends the health of a great portion of the people of this country.

The importance of having bread made in the best manner, seems not to be considered sufficiently, either as regards the palate, stomach, or purse. The waste in this country consequent upon improperly made bread, has been estimated by an intelligent, observing foreigner, to equal one-seventh of the whole consumption of wheat flour in it; and however much he may have over-estimated, there has been, and probably is, an abundance of half mixed, clammy, heavy, or sour bread, to be found in travelling through the land.

With all the cleanness that may be used, still the kneading of a batch of bread with the fists is unquestionably hard work; and unhappily for the bread-eater, cleanliness and industry are not always manifested in the persons employed to prepare his principal food.

Why cannot labor-saving machinery be used for bread making as well as for churning, working butter, and washing, and be adapted, also, to the use of ordinary families?

I propose that a premium of $50 be offered for an effective machine for kneading and mixing dough, that shall be simple in its construction, easily cleaned, to occupy a small space, durable, and not to exceed $5.00 in cost, for one to work 5 lbs. of flour at a time; and I hand over $10.00 towards making the above sum, or any other sum that those like minded may see fit to extend it to. To such as take pleasure in lightening the necessary burdens that rest upon females, I would commend a consideration of the above proposition.

The qualities of the machines that may be offered for such a premium I should be willing to have decided by three good housewives, *working women*, to be selected by the editors of the Cultivator. R. W., Jr.

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To Preserve Tomatoes for Winter Use.—In your Feb. number, page 59, is an article in which the recommendation to stew tomatoes for use in the winter, by some unknown person, is called an "untried experiment," and pronounced a humbug; the evidence furnished, being the want of success on the part of some careful housewife, who followed the directions in the recipe. Allow me to say, that on the 22d day of January, 1847, I had the satisfaction of partaking, at the table of a friend, of a dish of tomatoes, stewed plain, put up by the lady of the house as an experiment, to test the practicability of thus preserving them, which were as fresh in flavor and appearance as on the day they were taken from the vines. They were put up late in the season, after the hottest weather was past,—*thoroughly* stewed, put into large mouthed glass bottles, such as are used for pickles, sealed tight when cold, and kept in a basement room. I suppose the success was the result of the thorough cooking. They should be stewed until the watery parts are evaporated, and the pulp changed to a crimson color. Great care is necessary to prevent its burning. L. *Milton, Middlesex Co., N. J.*

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Coffee.—Nothing could be more appropriate than your description of the mode of preparing coffee in the June number of the Cultivator. From much experience in drinking, if not preparing coffee, over a large proportion of our country, I feel safe in saying that in nine cases out of ten, it is really unfit to drink, and possesses little or none of the qualities of good coffee. The truth is, the *burning* is taken in its literal sense, and the coffee is *literally* burned, not *browned*, as it should be. Prepared in the proper way, and used with a sufficiency of milk and sugar, it is both a delicious and nutritious beverage. Many of the evil effects of coffee arise from the over browning or burning, giving the decoction that harsh bitter taste, which, although almost universal, is not its proper taste.

Another evil attending coffee making, is, that it is not kept perfectly hot till the time of drinking, and *cold coffee*, whatever be its origin, is a most expressive phrase. For a family, nothing equals the neatness and perfection of a small heater, with a spirit lamp. This may appear to farmers and mechanics an extravagance, as it did to myself, till tried. But after teaching your family how to make good coffee, provide a spirit lamp and screen of the dimensions of your coffee pot. As soon as this is extinguished, cover the wick with a tin tube, and the cost of alcohol need not exceed *three cents per week*, and this is *not* paying too dear for a good cup of coffee.

In a country like our own, where all the substantials of eating and drinking are produced in greater abundance and perfection than in any other country in the world, we do not find, except as rare instances, in private families, hotels, or eating houses, the simple yet delicious beverage, good coffee. I have often thought that a cup of good coffee would beguile many a hungry and fatigued artisan and farmer, as well as other men, from the whiskey punch and brandy sling, were it as prominently put before them as the decanters in the bar room. H.

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Preserving Cabbages.—There are several good ways of keeping cabbages during winter by burying them out of doors. The difficulty is, it is hard to get at them during winter, without damage to those left. The following plan appears to avoid this difficulty:—Cut the head from the stump, and pack closely in a cask, taking care to fill up all the vacancies with chaff or bran, and keep in a dry cellar.

GERMAN EBENEZER SOCIETY.

A community of Germans, about six miles east of Buffalo, incorporated by the Legislature under the above name, having about four years since, purchased 8,000 acres of wild land in one body, embracing a number of water privileges, have made such improvements in agriculture and other matters, that I have thought a short sketch of them might not be uninteresting to the readers of the Cultivator. They have been known in Germany for one hundred and fifty years by the name of Separatists; and having sold out their interest and dissolved their community there, they have removed here to the number of 800 souls, and are expecting large additions from Germany during the present season. They have already built up three compact villages a mile or two apart, numbering about 100 large and commodious dwelling houses, some 30 or 40 barns, from 80 to 200 feet long, 4 saw mills, 1 flouring mill, 1 oil mill, 1 large woolen factory, a calico-printing establishment, a tannery, a large variety of mechanics' shops, school houses, &c., &c.; and have large herds of horses, cattle and swine, and over 2,000 sheep. Their property is all held in common, somewhat like that of the Fourierites, or Shakers at New-Lebanon, but in many respects radically different from those communities. They have invested money in various ways on their lands, and in this vicinity, to the amount of more than $1,000,000. Many individuals put into the common stock from $3,000, to $15,000 each; one put in $60,000, and one $100,000. If they ever leave the community, which they are permitted to do at any time if they choose, they can draw back the sum they put in, without interest. No one has yet left them from dissatisfaction with their system. By mutual agreement, they can dissolve at any future time and divide the profits. They marry and are given in marriage, and each family lives separate, except that they, in most cases, eat some six or ten families together at a common table. The whole community is under the direction and superintendence of a set of trustees or elders, chosen annually by themselves, who buy and sell and manage every thing as they think will be best for the whole; and as they have all kinds of mechanics among themselves, they have little occasion to go abroad for help. All the children are kept at school under competent teachers, and the older ones are instructed in the higher branches, and also in the English language. Besides being well supplied with books in their families, they all have free access to a large public library.

Religion seems to be the governing and inspiring element in this community; each day's labor is preceded by a season of devotional exercises in their several families, and after the close of labor at night, they assemble by neighborhoods, and spend an hour in prayer and praise. The afternoon of Wednesday and Saturday is devoted to religious improvement. The sabbath is strictly observed by an omission of all secular business, and by various religious exercises, both in their families and public assemblies. Thus far all has been characterized by perfect harmony and peace.

In visiting this community, a stranger will not fail to be struck with the neatness, order, and perfection, with which all their farm operations are carried on; and the astonishing improvements they have made in so short a time, — mostly within three years; — for, besides the buildings they have erected, they have cleared between 3,000 and 4,000 acres of land, from which nearly every stump is thoroughly eradicated, planted about 25,000 fruit trees, and made many miles of durable fences. Their gardens, yards, and fields, display refined taste and the highest state of cultivation; and from present appearances, they are destined to become immensely rich. In eating, they act on the principle, that to eat little and often, is better than overloading the stomach at long intervals. And they accordingly eat uniformly five times each day: viz, at 5½ A. M.,—9,—11½; 3 P. M., and 7. All of a suitable age, both male and female, are required to labor at such business, as either their taste, genius, or habits may require. And whenever from any cause, such as a change of weather, or the sudden ripening of a crop, an extra number of hands are needed, they can bring 50 or a hundred into a field at once, with any required number of teams, and thus enjoy great advantages in cultivating and securing their crops. By a rather minute division of labor, each man or set of men is required to do one thing, and order and system are every where manifest, and nothing wasted. In a high sense, a place is provided for every thing, and every thing found in its place. In portions of machinery for their factory and mills, and in agricultural implements, they are cautious in adopting our more recent improvements, preferring to use those they brought with them from Germany. Still their cloth and other manufactured articles are made in the best manner, and their farm operations crowned with the highest success.

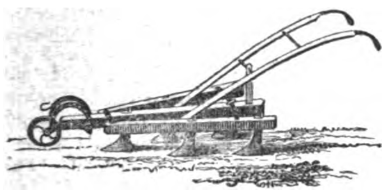
Separate barns, spacious and well ventilated, are provided for horses, oxen, cows, yearlings, calves, and sheep, so that they are all sheltered in the most comfortable manner through the winter, and the apartments for the sheep are thoroughly whitewashed four or five times a year. Thus they promote health and increase the weight and fineness of the fleece. The sheep are divided into parcels, and each is under the constant attendance of a shepherd and his dog during the day, in summer, and driven up every night and hurdled; and the land thus manured by them during the night, is at the proper time sown to turneps. The cattle are also kept in separate classes, and each is under the constant attendance every day of its herdsman, and driven up to their yards at night. And then look at their series of barns, say 150 by 40 feet, standing in a line eight or ten rods apart, and the whole lower part fitted up exclusively, one for horses, another for oxen, another for cows, another for young cattle, another for calves, and another for sheep; another series standing in another line and filled, some with hay, others with wheat, others with oats, corn, barley, &c.; and then other ranges of buildings, enclosing hundreds of swine; and others still, to accommodate all the poultry belonging to the community.

Every stable for horses and cattle, has trenches to carry off all the liquid manure into tanks, to be thence conveyed to the growing crops of the farm; and indeed in all their barns and yards, the utmost attention is paid to making and preserving manure, and their luxuriant crops bear ample testimony to its importance, and the skill with which it is applied. Even the privies at their houses have their vaults extended some three feet back, and covered by a lid hung on hinges; and the night soil removed by long-handled dippers provided for the purpose, is used most plentifully on their gardens. And such splendid heads of brittle lettuce, such cucumbers, cabbages, beans, peas and corn, as were grown under the stimulating effects of this liquid excrement, it has seldom been my lot to see.

Flora, too, has here her votaries. There are, also, engravers and exquisite painters of plants, fruits, and flowers, for whose works orders are constantly on hand from A. J. Downing, and Wiley & Putnam, and Endicott, of New-York, and Dr. Gray, of Boston, &c.

Altogether, they are a singular and interesting community, and a visit to them being but a pleasant ride from the city, can hardly fail to be attended with both pleasure and profit. Wishing to enlarge their operations, they have recently purchased a large tract of land (1,000 acres,) four miles above Chippowa in Canada, on the Niagara river, and established there a branch of their community. Success to their efforts.

Buffalo, July, 1847. H. A. P.

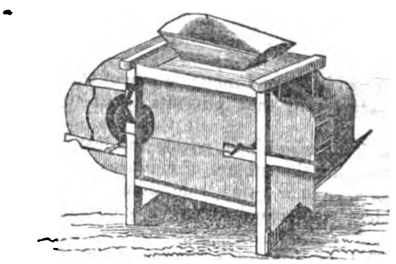


Cultivator.—The above cut represents an implement generally called a Cultivator in this country, or what is called a horse-hoe in England. It is made in various ways, and of different materials. The one above delineated has cast-iron teeth or feet, set in a frame of white-oak. This kind answers a very good purpose in loose soils, but for those of a compact texture, or where strong weeds and grass are to be destroyed, it is better to have steel teeth, which may be brought to a sharp edge, and made to penetrate hard ground, cutting clean as they go. Cultivators of proper construction, are far better than the plow for cultivating crops in general. They leave the ground lighter, less thrown into ridges, and less liable to be dried up.

We have rarely seen an implement of this kind constructed exactly to our liking. Their operation is generally too superficial, except for the lightest soils, and many of them will not even work the surface sufficiently. Soils frequently pack so closely—especially those plowed early in spring or in the previous fall—that some tool is required to penetrate them to a considerable depth in order to induce a proper decomposition of the vegetable matter, and allow the roots of plants to be fully extended. To accomplish this object effectually, the cultivator should be provided with long curved teeth, like the coulter of a plow, which should precede the feet or surface teeth, penetrating the ground, if need be, to the depth of six to eight inches, or as deep as it was at first plowed. This would effectually break the tenacity of the soil, open it to the action of heat and air, and leave it clean and friable.

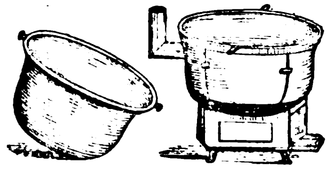
It is also a great defect with the teeth of cultivators generally, that they are liable to clog. The fibrous matters of the soil, and the soil itself when wet, collect and adhere around the upper part of the tooth, besides adding greatly to the resistance in moving it, prevents its proper action upon the soil. George Geddes, Esq., of Fairmount, Onondaga county, lately showed us a tool which had been made by his direction, which appears to us very well shaped, and is in particular calculated to obviate the objection of clogging. It is Mr. G.'s design to have a cultivator made with teeth of this description, and we hope to have an opportunity of seeing it work at the next State Fair.

A useful appendage to a cultivator is a wheel, attached as represented in the cut. It gives a steadiness to the working of the implement, regulates the depth, and enables the operator to manage it in all respects with more facility and precision.



GRANT'S FANNING MILL.

This is considered one of the most perfect machines for cleaning grain and all seeds which has ever been made. It cleans grass and mustard seed, as well as all kinds of grain. It has acquired a very extensive reputation—the manufacturer having sold large numbers of them in many parts of the United States. It has latterly been introduced in the rice districts of the south, where they are highly commended for the purpose of cleaning rice. It has received the highest premiums from various agricultural societies, among which may be named the New-York State, the Pennsylvania and Maryland Agricultural Societies, and the American Institute, and many county agricultural societies. We believe it has succeeded, in all cases, in competition with all other machines. Each mill is provided with eight sieves, and when properly regulated, it perfectly separates and cleans all kinds of seeds. For instance, in cleaning wheat, it will separate whatever timothy seed may be mixed with it, leaving it in a box by itself. Some men have stated that they have saved in this way, timothy seed enough in one season to pay for the mill. There are four sizes, from No. 1 to No. 4, and the prices range from $21 to $27.



MOTT'S PORTABLE AGR'L FURNACE.

This is undoubtedly the best apparatus in use for cooking vegetables and other food for stock. It is likewise well adapted to household purposes, where water is required to be heated in large quantities. It is a double kettle or boiler, connected on the top of a box stove in such a manner, that the fire passes between the outer and inner kettles, which causes the water to boil in a short time, and with little fuel. There are several sizes, holding from fifteen to one hundred and twenty gallons, and they are sold at the following prices:

15 gallons,.......	$9 00	60 gallons,....	$23 00
22 do.	12 00	80 do.	30 00
30 do.	15 00	90 do.	35 00
40 do.	18 00	120 do.	40 00
45 do.	20 00		

Lime as Manure.—Dr. Darlington, in a letter to the Ohio Cultivator, speaking of the use of lime, says, "The great secret, I believe, of improving land, is to manure well all the ground that is cultivated—and employ lime as an *auxiliary*"—by applying in rather small and repeated dressings while the land is in grass.

WHAT MANURE DOES THIS FIELD NEED?

This inquiry is beyond question one of the most frequent and important that presents itself to the farmer.

With the light which has, within the last few years, been thrown upon the subject of manures, their nature, and the secret of their value, something like a practical course has been revealed. It may be illustrated as follows:

If a soil fails to produce a given crop, it is because it either wants the *requisite texture*, or it wants certain essential inorganic ingredients, or it may be deficient in both.

If vegetable refuse in sufficient quantity has been strown over and plowed in, the deficiency of one or more *essential inorganic ingredients*, must be considered the solution of the failures.

Now how shall this deficiency be ascertained? How shall it be determined what a soil needs?

It may need gypsum, or phosphates, or potash, or soluble silica, or lime. It may be benefitted by ashes, or poudrette, or guano, or fish. But it probably does *not* need *all*, and would not, probably, be equally benefitted by them severally.

Which, then, shall be selected? How shall any one without aid, be enabled to determine what will benefit his soil *most?*

The following suggestions are made in general reply to this inquiry.

Having prepared a few square yards or rods, so that the texture shall be all that is desired, let equal areas —six feet square each, for example—be accurately measured and staked. If the soil in the same field be variable, each kind may be treated for a separate experiment.

Then let equal quantities by weight, of a thoroughly pure grain, wheat, or rye, or oats, or any other it may be desired to try, be sown and covered, in these several areas. Only one kind of grain will be employed in the experiment. If others are to be tried, let separate areas be selected and prepared—a suit for each grain.

Then take small quantities of gypsum, potash, soda, ashes, bone-dust treated with diluted sulphuric acid, night soil, or any of the so called manures it may be wished to try, and put them upon or near the surface of the soil. If deeply buried, they might be dissolved by rains, and carried down beyond the reach of roots.

Now all will receive from the frost, the rains, the dew, the sunshine, and the drouth, the same treatment. From the native soil they will derive equal measures of nutriment.

But from the added manures they will derive unequal advantage. Some of the additions will contain a desired ingredient—others will not; and the relative values will be indicated in the relative weights of the ripened grain at harvest.

The seed was weighed. The harvest must be weighed. The better manure will be pointed out in the higher weight and plumper appearance of the grain.

That the manures may be compared, and the relative profits of this or that readily estimated, positive quantities should be employed, that is, such, that by measure or weight, the cost of that used may be accurately known.

The weighing for the occasion, if not otherwise convenient, might be made with the sugar and tea scales of the nearest grocer As the grain to be sown is, for each lesser piece of ground to be the same in weight, the quantity for one being determined, it may be placed in one scale pan, and the other parcels severally balanced against it.

There is some trouble in all this care about *quantities;* but if the conviction be deepened that a faithful attention to them is indispensable in experimentation that is to be of value, it may perhaps be more cheerfully engaged in.

It sometimes, indeed frequently, happens that farmers purchase large quantities of a given manure, because they have learned that it had been found serviceable in particular cases. They hope to reap a profit commensurate, within certain limits, with the amount of manure employed; regardless of the greater or less correspondence there may exist between the soils upon which it had been found profitable and their own. They employ it. They are disappointed. The manure does *not* contain what *their* soils need, though it may have been admirably suited to the improvement of others.

What the producer wishes in making purchases of raw material, is, to obtain as much of that which can be used, and as little of that to be thrown away, in a given quantity, as may be.

So with the grain grower. He wishes to pay for *just that* which will grow wheat, or corn, or oats. Other materials, of no service to the immediate crop, only to be washed away by rains before a seed demanding them shall be sown, he cares less to pay for.

E. N. Horsford.

Cambridge Laboratory, May, 1847.

Nutriment in Different Substances.—Dr. Warwick, an English lecturer, gives an interesting comparison of the amount of nutriment contained in different vegetable and animal substances, and the time for their digestion. Of vegetables, he considers that beans contain most nutriment. As to animal substances, he remarked that mutton contained 29 per cent. of nutriment, beef 26, chicken 25, pork 24, cod and sole 21, haddock 18, &c. As to digestion, boiled rice occupied an hour, sago an hour and forty-five minutes, tapioca and barley two hours, stale bread two hours, new bread three hours, boiled cabbage four hours, oysters two and a half hours, salmon four hours. Venison chops one and a half—mutton three—beef three—roast pork five and a quarter—raw eggs two—soft boiled eggs eight—hard ditto, three and a half.

Pumpkin Crop.—J. B. Noll, of Monroe county, Ohio, raised the past year on 97 rods of land, or a little less than five-eighths of an acre, about 19,000 lbs. of pumpkins, besides 70 bushels of potatoes, and 20 bushels corn. Most of the pumpkins averaged 21 lbs. each—five averaged 83 lbs. each. The pumpkins were at the rate of about 15 tons to the acre.

Durability of Manure.—A writer in the Farmer and Mechanic states that he has noticed the bottoms of coal-pits, between 65 and 70 years after the burning, so fertile that they invariably bore heavy crops of grass or grain. This manure, it is known, consists of burnt earth, ashes, charcoal, &c. Common barn manure becomes nearly or wholly exhausted in a comparatively short period.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

NOTES OF A TRAVELLER IN ENGLAND--No.6.

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Laborers.—The condition and character of the laboring population in England, is widely different from that of the same class of persons in this country. The laborers there have no more associations with the nobility, gentry, and larger tenant farmers, than have the slaves at the south with their masters. The line of demarkation is as decided and as stringent in the one case as in the other. Never have I seen a laborer approach the farmer without doffing his hat, and in various other ways manifesting the utmost servility. The prospect of their condition being altered, in the present state of things, seems utterly hopeless. Their opportunities for education are of the most meagre description at the best, and the scantiness of their wages prevents them from resorting to any special conveniences for their improvement, or for the education of their children.

I found on conversing with them, that they were just able to live, with all their time devoted to the interests of the landlord or farmer, together with the services of their wives and children, when married. The children, at a very tender age, are brought into the field to labor, and thus continue on through life, and in many cases with little more intelligence, apparently, than the animals upon the farm. The wages which a man receives would not vary much from $8 or $9 per month, in those parts of the kingdom I visited. This does not include his board—that he must provide for himself. This is usually very scanty, as compared with the provision made for laborers in this country. In the morning a little bread, and coffee, and oatmeal; at noon, bread, potatoes, and cabbage, or something of the kind, and supper equally limited. Beer in some cases allowed daily, in addition to wages, but not very general. I frequently conversed with them on their prospects for the future, and found almost invariably, that they were toiling on without hope, except to provide for their daily wants—never expecting to procure a competency for their families in the event of their being removed by death.

In Wales, where living is cheap, oatmeal being a very prominent and truly nutritious food, the laborers do rather better than in England. Still the hope of ever realizing anything for a wet day was scarcely thought of. I met in Anglesea, Wales, a Welshman who had lived with me in America a year and a half, and who returned home in the fall of 1845, for the purpose of endeavoring to persuade his father's family to return with him to America. The family were in comfortable circumstances, and could have sold the lease of their farm of about 180 acres for a sum that would have purchased a large freehold in this country. The heads of the family were advanced in life, and the terrors of a sea voyage prevented their acceding to his request. He had been in America about six years, had labored very industriously, and had taken the precaution to place his wages at the end of each year at interest, (after clothing himself,) and when he returned to Wales he took with him $500 in money, besides a supply of clothing that rendered him in the eyes of the Welsh, a man of wealth indeed. He went with me to church on the sabbath, with his blue Yankee coat, white hat, and the rest of his clothes to match, and in his outward appearance had no more resemblance to the native population than I had myself. It was entirely beyond the comprehension of his family and of his neighbors how he could have acquired this money by his labor alone. When I arrived at the house, it was just about sunset in July, when the workmen had come in from their labor, and the appearance of a strange carriage coming up the lawn, drew all to the door; the Welshman recognized me at once, and addressed me by name, and as I descended from the carriage, I observed his mother was very much agitated, and addressed him earnestly in Welsh. I went into the house, and he left me for a few moments, and returning, informed me that his mother, on hearing my name, was so much affected, fearing I had come on account of the money he had brought with him—she never having been satisfied that he had honestly earned it. As the old lady could speak English readily, I was enabled to relieve her entirely, and to satisfy her that the labors of her son had been only justly rewarded with the amount which he had brought with him. It gave them an impression of the vast difference between the condition of a laboring man in Wales and America which nothing else could so effectually have done.

I was often surprised at the ignorance in relation to America, among not only the laboring classes, but also among farmers of considerable intelligence. In conversing with a farmer who held an important office in the parish where he resided, who was a man of wealth, and on matters relating to his own country was peculiarly intelligent, I stated to him, among other things, that a passage from New-York to Liverpool or London could ordinarily be made about as soon as from New-York to New Orleans. He was utterly astonished—supposing that these ports were not probably further distant from each other than London and Liverpool. But when I told him that the river on which New Orleans was situated was over 3000 miles in length, he looked at me as much as to say, *You must be a Yankee!* To satisfy him, however, I appealed to an atlas, which was fortunately in the house where we were visiting, and was enabled to satisfy him that this was literally true. His ideas of American rivers had never reached beyond the length of the Thames, or the Mersey, or some other of no greater magnitude.

In Ireland, too, it was not uncommon when it was ascertained that I was from New-York, to have inquiries made, if I did not know Patrick McQuade, or some other Irish friend who had settled in Wisconsin, Iowa, or New Orleans! I was often, as you may well imagine, obliged to say that I had not the pleasure of their acquaintance. To them this seemed passing strange.

There is a peculiar class among the Irish, the drivers of their jaunting cars, a vehicle in which the driver is in front, and the passengers set with their backs to each other, and their feet over the wheels. These are among the finest specimens of Irish ingenuity and wit of any class I met with. In riding from Drogheda to the railroad depot, in one of the cars, the driver began a conversation by inquiring of me—"Your honor came from Belfast by coach?" I answered him, No. "From Cork then?" and so on, until at last he ascertained that I was neither English, Scotch, or Irish, but actually from America, the land of bliss, in his imagination, and every inhabitant of which was truly the Irishman's friend. In the whole of this conversation, however, he had not directly asked me a question as from where I came, and yet succeeded eventually in ascertaining from me the place of my residence. I frequently rode in this method of conveyance, which is among the cheapest of any in which I ever travelled, and I always felt amply rewarded for my ride by the rich humor of the driver, as well as the fund of useful information ever at hand in answer to my inquiries, however unnecessary they may have been.

A brighter day, I trust, is dawning upon the down-trodden millions of Great Britain and Ireland, or rather for their children and successors. The subject of education, and that too of the masses, is one of the great measures of reform which is attracting attention everyweere in the kingdom Lord John Russell, the present premier, put this forth as one of the great whig measures, on taking the seals of office. Sir Robert Peel, in his masterly speech on resigning his position as premier, and one of the ablest speeches ever made before the British Parliament by a retiring minister, when alluding to measures for the relief of Ireland, after saying that equal laws and privileges with England must be secured to her, added, and the education of her entire population must be secured, in order to give to Ireland what most of all she needed.

The following remarks before the Mechanics' Institution of Hastings and St. Leonard's, by a distinguished gentleman, J. H. Maw, Esq., on the subject, are worthy of consideration. "In every christian country, it must be desirable that all classes should, as far as possible, be united by ties of genuine fellowship; but it is probable in no country are wide severing distinctions so conspicuous as in our own. Attempts have of late been made by certain chivalrous spirits among the great ones of the land, to break down some of these barriers; and it is allowed in such a place as Lord's cricket ground a mechanic may match himself with a Lord. Still we find in all other places the *noli me tangere*—the "touch me not" feeling, may remain as strong as ever. The fact is, that cricket is not the right remedy for the evil complained of. There is little if any virtue in it. But there is great virtue in such pursuits as ours, which have a direct tendency in many desirable respects, to assimilate the lower to the higher classes of society, and by assimilating, gradually to approximate, if not eventually to unite them."

The ball which has been set in motion, like that started by the corn law league at Manchester, will never rest until the work is accomplished. When this is done, some of the iron barriers that now separate the classes will be snapped in sunder, and they will find it a very different thing to govern minds from what it has been for centuries to govern mere machines. The extension of suffrage, the abolition of monopolies, and many other things, will follow. These things will move slowly, as everything does there but steam engines and race-horses, but they are sure to come; the decree has gone forth; and when they do come, the condition of millions will be improved beyond all calculation. They who do the labor, instead of being mere machines, will have become intelligent, and will see to it, that they too have something to do with the avails of their labor. H.

SKETCHES OF FARMING IN WESTERN NEW-YORK.

In the latter part of June and beginning of July last, we had the opportunity of taking some hasty glances at some of the farms in Cayuga, Tompkins, Seneca, Ontario, and Onondaga counties.

Stopping at Auburn, we were accompanied by Col. Sherwood on a very pleasant excursion up the eastern shore of Cayuga Lake. Our first call was at the beautiful village of Aurora, where we attended an exhibition of the Aurora Horticultural Society, some notice of which will be found in another part of our work.

From Aurora we proceeded up the shore to Lake Ridge, Tompkins county, where we passed the night with our friend L. A. Morrell, Esq. Mr. M. has been for some time engaged in sheep-husbandry, and is well known as the author of the valuable work entitled *The American Shepherd.* His home farm consists of 600 acres, and in connection with his brother he owns another farm, a few miles distant, of 400 acres. The home place is very pleasantly situated, forming, for the most part a gradual slope to the shore of the lake. The dwelling is near the centre of the farm, commanding an extensive view of the rich and beautiful country on both sides of the lake, in the counties of Tompkins, Cayuga, and Seneca.

Cultivation is not very extensively practiced, by Mr. M., a considerable portion of his farm not being naturally well adapted to the production of grain crops. He has now, however, commenced under-draining, a judicious execution of which will no doubt enable him to raise good wheat on fields where that crop has not hitherto been grown to advantage. The farm is particularly arranged for sheep, and is divided mostly into eight e lots. The fences are of rails, of which there is twenty-five to thirty miles! The sheep-pastures, ose portions of the farm which are best suited to tillage, produce, after having been grazed a few years, excellent crops of wheat; and we here saw some of the best fields of that grain that we have met with the present season. On the whole farm there are about fifty acres of wheat, twenty of oats, and ten of Indian corn.

Mr. Morrell's flock of sheep consists of 1,100. The blood is mostly Saxon, and the wool is considered of superior quality. We regret we did not see it—it had been just shipped for Mr. Blanchard's depot, at Kinderhook. Mr. M.'s reputation for cleansing and putting up fleeces, is of the best character. The average weight of the fleeces of his flock is about 2¾ lbs. He has lately purchased several rams from Mr. Samuel Patterson, of Washington county, Pa. They are of rather small size, but well formed, and produce very fine wool. Mr. M. has very confident expectations of improvement from the use of these animals in his flock. He has several lambs from them out of his best ewes, which look well. The management of his sheep in general, especially in regard to their feeding, shelter, &c., appears to be very judicious and economical. Care is taken that they have just the kind and quantity of food required to keep them in proper condition—neither too fat nor too lean. Both these extremes should be avoided. The former tends to a grossness of staple which deteriorates the value, and the latter to weakness of fibre, lightness of fleece and feebleness of constitution.

After leaving Mr. Morrell, we called at Mathias Hutchinson's, King's Ferry. He has about 400 acres of prime land, and is a very snug and systematic farmer. Our stay was too short to admit of so minute an examination as we would have given, but from what we saw, it was evident that *order* is here the "first law." Mr. H. keeps 350 Merino sheep. They are a good flock, of large size for the breed, and of strong constitution. He showed us their fleeces, which were cleaned to snowy whiteness, and put up in the most perfect style, and a room finished expressly for storing this article, and which was clean enough for a parlor. Of the ewes' fleeces, 95 averaged 4½ lbs. each, and all the yearlings in the flock averaged 3½ lbs. He has, for two or three years past, obtained 40 cents per lb. for his whole lot. He had not engaged the clip of the present year. The flock is managed with much care. Every sheep is numbered and registered in a book—every fleece is weighed, carefully examined by Mr. H. in person, and its appearance and quality particularly noted in the book.

We spent a few hours most agreeably with David Thomas, at Greatfield, near Aurora. He has for many years devoted himself to the cultivation of fruit, and by the dissemination of the choicest kinds, and by his useful example and influence in other respects—especially by the numerous and valuable productions of his pen—he has conferred very important benefits on the community, which will cause his name to be respected by coming generations. He has a large orchard, comprising the choicest apples, pears, peaches, cherries, plums, &c., and a large garden appropriated to the more tender fruits, flowers, and rare plants. The location is very favorable to fruit, as is also much of the country on the Cayuga and Seneca lakes. The immense depth of these waters, which are seldom or never frozen over, causes the temperature to be greatly modified, and produces along their borders a climate corresponding to a latitude several degrees further south. This was strikingly observed in the ripeness of fruits and the forwardness of vegetation generally, as contrasted with the same parallel on the Hudson river.

But besides the advantages of climate, this region is favored with a soil remarkably well suited to the growth of fruit trees and the production of fine fruit, and the fact is worthy of remembrance that before the country came into the occupancy of the whites, the Indians had here introduced, to a considerable extent, the apple, and in several instances, the pear, the peach, and the plum. In the journals kept by the officers who accompanied Gen. Sullivan in his expedition up the Susquehannah, for the purpose of destroying the Indian settlements on these lakes, in 1779, mention is frequently made of fine apple and other fruit trees having been cut down by our army in their devastating march through the country. Schoolcraft, in his *Report on the Iroquois*, 1846, observes in relation to the fondness of the Indians for the apple—"From the earliest introduction of this fruit into New-York and New France, from the genial plains of Holland and Normandy, these tribes appear to have been captivated by its taste, and they lost no time in transplanting it by sowing the seeds, to the sites of their ancient castles." On these warm and fertile locations, they flourished well; and nowhere else in the whole country, we believe, were found among these people such numbers of fine fruit trees, some of which, having escaped the general destruction above-named, are still standing—mementos, at once, of the rapid decline of the red man, and of our own rapid progress and increase.

A little below Aurora, we passed the handsome farm of Mr. Grinnell, who we learned was absent, so we did not stop to make a particular examination of the premises. The buildings and fences, as well as the farm generally, from what we could see, appear to be in complete order, and in connection with the natural beauty of the location, the farm unquestionably forms one of the most desirable residences in the country.

On returning to Auburn, we called at Springport, where are two remarkable Springs. They make their appearance a short distance from Cayuga lake, and by excavating cavities and forming embankments, reservoirs are made, each of which affords a good water power. At one of them is a large flouring mill, and at the other a woolen factory. The springs are supposed to be the outlets of subterranean streams from Owasco lake, near Auburn.

Passing up the railroad from Auburn, we stopped at Seneca Falls. Here we called on G. V. Sackett, Esq., who, after having shown us his extensive and fertile farm, kindly volunteered to convey us to those places in the vicinity which were regarded as most interesting. Mr. S.'s home farm consists of 680 acres, the principal portion of which was in forest till within seven or eight years. The soil is of great richness, but lies, in some instances, a little too flat. The original growth was hickory, sugar maple, elm, ash, and poplar, (or tulip tree,) all of which grew to a very great size. Some of the forest which has lately been cleared, afforded sixty-eight cords of wood per acre. He is devoting his farm considerably to wheat. At the time of our visit he was cross-plowing his wheat fallows, of which he had sixty acres that had been broken up from sward in the spring, to the depth of full seven inches. He has lately built a convenient and substantial grain barn. It is eighty feet long by forty-six wide. It has a basement story seven and a half feet high—the walls of stone, two and a half to three feet thick. It has two floors running crosswise of the barn—one of them is between two bays, which go to the bottom of the basement, and the other is at one end of the barn, over the stalls for horses. Under the first-mentioned floor, there is a grain bay, made perfectly tight with mortar of water-lime, and of sufficient capacity to hold 2,500 bushels of clean wheat. There are on the farm 400 sheep, and Mr. S. intends hereafter to keep from 1000 to 1500.

Frederick J. Swaby, Seneca Falls, has a farm of 350 acres, which he has lately purchased—the present being the first crops of his own raising. He is from the vicinity of Philadelphia, Pa. His farm has not, apparently, been well managed previous to coming into his possession; but bids fair to become a first-rate grain farm. Mr. S. has forty acres of wheat, which looks the best of any we saw in the neighborhood. He has practised, in Pennsylvania, plowing in clover, as a means of improving the soil for wheat. He thinks it of the greatest benefit to plow in the clover after it is ripe—if turned in while it is green and full of sap, he thinks it makes the ground *sour*. (Our readers will remember that we have several times spoken in the Cultivator of green clover having produced an effect similar to what is here mentioned.) Mr. Swaby is a young man who has lately commenced operations for himself, but appearances indicate that he will make a successful farmer.

Mr. Sackett mentioned to us several examples of profitable farming. John Hoster, lately deceased, commenced farming with fifty acres of land, which at that time was reckoned worth $400 to $500, and this was all the property he possessed. He died at the age of 48 years, and his property was appraised at $40,000. This was free and clear of all encumbrances, and had been acquired *wholly* by farming.

George Gamber commenced by renting of Mr. Sackett eighty-five acres of cleared land, which cost $45 per acre. He took the farm for three years at the "halves." During that time Mr. S. received equal to ten per cent interest on the cost of the land, and the tenant laid by so much money that at the expiration of the three years he bought a farm, towards the payment of which he advanced $1,800. He married, however, about this time, and received $600 by his wife—the remaining $1,200 he made in the three years he rented the farm of Mr. S. Wheat and clover seed were his leading crops. He is now considered wealthy. We passed his farm, and were pleased with its neat appearance, and with the fine wheat, barley, and corn crops we saw on it.

From the western shore of Cayuga Lake, we passed over Seneca county to the eastern shore of Seneca lake.

At Oaklands we called on **John Delafield**, Esq., formerly of the city of New-York. His farm consists of 352 acres He has resided on it four years, and has during that time made very great improvements. All the buildings, with the exception of a part of the house, have been put up by Mr. D., as well as nearly all the fences. He has proceeded in the most thorough manner with all his fixtures. His farm is well laid out, and all his expenditures have been on a liberal, but judicious and economical scale. His principal barn is sixty-five feet long by forty-two wide. There is a cellar ten feet deep under it, which is divided into various apartments. Some of them are made perfectly tight and free from dampness, for storing grain. Others are used for storing vegetables, and others for storing chaff and cut fodder. Attached to the barn is a shed sixty-two feet long and twenty-six wide. Apartments for the cattle are provided in one portion of the shed, and another portion affords shelter to a flock of 350 sheep. A stationary horse-power, on which six horses, if needed, can be worked, is placed in the barn. By this power he threshes and winnows his grain, cuts all his hay, straw, corn-stalks, and other fodder, cuts wood, cuts boards and timber into various shapes and sizes, and grinds corn, (cob and all,) or other grain.

The grain is threshed on the second floor. It is at once separated from the straw by an apparatus used for the purpose, and passes into the fanning-mill, which is in the basement, and is worked at the same time and by the same power which carries the thresher.

The chaff from all kinds of grain is stowed away in bins, and used for feeding stock in winter. This, with cut straw and corn stalks, furnishes the only food given to cattle from the time they come off the grass till the first of February. The mode of feeding is somewhat peculiar. One of **Mott's** agricultural furnaces, of a large size, is placed in an apartment in the barn cellar, which is fitted for the purpose. In this a quantity of water is heated. Barrels are provided, into each of which is put a quantity of the chaff or cut fodder. When the water boils, a sufficient quantity of it is turned into each barrel to completely moisten the straw or chaff, and the barrels instantly covered. In a few hours the chaff is cooked, when it is fed to the cattle, who eat it readily, and Mr. D. thinks do much better on it than on dry fodder. This course is pursued twice a day, so that the cattle are always fed with the chaff before it is cold. Mr. D. assures us that he has succeeded in keeping his cattle in fair condition on this food for the time mentioned. After the first of February, hay is fed, and if the condition of the animals requires it, meal or roots are added.

The great advantage, Mr. D. thinks, from cutting all the fodder, is, that the poorer parts, or what is not used as food, are more quickly converted into manure. The coarsest straw and the largest corn-stalks are readily worked into the manure—absorbing the liquids, and soon undergoing such a decomposition that they can be used to advantage for crops.

Mr. D. makes a great saving of hand labor and a saving of expense by the use of machinery. We have alluded to the different kinds of work accomplished by the horse power. In addition to this, he has machines for sowing grain of all kinds, harvesting grain, planting corn, beans, peas, and other kinds of seeds. The sowing machine is **Seymour's**. It is adapted to sowing all kinds of grain, clover, and grass seeds, broadcast, as well as to sowing plaster, ashes, bone-dust, poudrette, &c. It performs its various operations with great exactness—regulating the quantity of seed to a quart per acre. It is drawn by a horse, and requires but one man to tend it. Twenty acres a day, on land in proper condition, may be considered a fair average of its performance. We saw several fields of wheat, barley, and oats, which were sown by this machine and the crops stood better and were more even on the ground than hand-sown grain usually is. The cost of the machine is $45.

The harvesting machine is **Hussey's**. It has been used by Mr. D. two seasons, and is much approved. It cuts the grain very clean, leaves it in good order to take up, and makes a great saving of expense. It requires a force of two men and a boy, and two horses, and will cut seventeen acres per day. It cost $100. It is a simple and strong machine, not liable to break or get out of order.

Mr. D., for the past season, used **Emery's** seed planter in putting in his corn. He showed us twenty-five acres of corn, which stood well, and which was planted by this machine in two days. It is drawn by a horse, and requires one man to manage it.

Mr. **Delafield's** fences are mostly rails, put up in a superior manner. The stakes are placed at the corners (the fence being of the *worm* fashion,) upright, and are fastened by iron wire, twisted in the form of a withe. If properly put on, the wires need no attention,as long as the stakes last. They do not prevent the stakes being driven into the ground, as is rendered necessary by the heaving of frost or the decay of the bottoms. Their first cost is less than two cents per pannel.

We were highly gratified with the system, order, and neatness, observable in every department of Mr. **Delafield's** farming. At the foundation of all, he has laid a comprehensive and well-arranged plan; next, he has provided everything for the performance of the various operations in the best manner; next he has provided a *place* for everything; and lastly, he has established a rule, which appears to be punctually observed by every individual on the farm, that *everything shall be in its place.*

Every person employed on the farm, is furnished with a printed card, comprising the rules and regulations. Believing that these rules may be beneficially adopted by others, we subjoin them:

It is expected that all persons employed on the Oaklands Farm, *will carefully attend to the following system:*

Regularity in hours.
Punctuality in cleaning and putting away implements.
Humanity to all the animals.
Neatness and cleanliness in personal appearance.
Decency in deportment and conversation.
Implicit obedience to the proprietor and foreman.
Ambition to learn and excel in farming.

Maxims of order and neatness.

1. Perform every operation in proper season.
2. Perform every operation in the best manner.
3. Complete every part of an operation as you proceed.
4. Finish one job before you begin another.
5. Leave your work and tools in an orderly manner.
6. Clean every tool when you leave off work.
7. Return every tool and implement to its place at night.

We shall continue our sketches next month.

THE ORCHARD AND THE GARDEN.

ALBANY AND RENSSELAER HORTICULTURAL SOCIETY.—An union Horticultural Society having been lately formed between the counties of Albany and Rensselaer, the first exhibition was held at the Geological Rooms, Albany, on the 3d of July. The show was all which could have been anticipated for the first effort, being indeed highly creditable in all respects. In the floral department, especially, there was a good display and quite a general competition. The principal contributors to the exhibition were Messrs. NEWCOMB, of Pittstown; WALSH, of Lansingburgh; WARREN, H. VAIL, D. D. Y. VAIL, of Troy; MENAND and MOORE, of Watervliet; DOUW, CHAPMAN, and HAYDOCK, of Greenbush; RATHBONE, PRENTICE, WENDELL, WILSON, HALL, KANOUSE, DENNISTON, and MARCH, of Albany. There were shown several fine varieties of cherries and strawberries. Mr. JAMES WILSON received the premium for Swainstone's seedling, as the best strawberry, and Dr. H. WENDELL the premium for the greatest number of varieties of cherries of the best quality. Among several other kinds, Dr. W. exhibited two which were raised by him from seed planted seven or eight years ago. One of them is decidedly of the Bigarreau class, and promises, when at maturity, to be a superior fruit, both in appearance and quality. The other seedling is of rather small size, but of very pleasant flavor. Being the first season that it has been tried, its character can hardly be fully determined.

The exhibitions of the Society are to be holden alternately at Albany and Troy, on the first and third Saturdays of each month, during the warm season, and monthly the remainder of the year. There is every prospect that the society will be productive of great benefit to the section in which it is located, and we have no doubt that it will have the liberal support of the citizens of Albany and Troy, and the friends of horticulture generally in the vicinity.

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HORTICULTURAL EXHIBITION AT AURORA.—We had the pleasure of attending a Horticultural exhibition at Aurora, Cayuga county, on the 23d of June last. There was a fine show of the fruits, vegetables, and flowers of the season. Of strawberries there was a good assortment, which were generally of superior quality. HENRY MORGAN, Esq., of Aurora, presented several varieties; among them were some of very large size labelled rather inappropriately, "Aurora Dwarf." They might have been better styled *giants* than dwarfs. Some, however, believed them to be Ross's Phœnix. But from superior cultivation, or some other cause, they had attained a most uncommon size—one berry being 5¼ inches in circumference, and in a large dish full there were none of much smaller size. It was rather early in the season for cherries, but there were fine specimens of the Mayduke, Bigarreau, and Black Tartarian—the two latter not quite ripe. Of vegetables, there were fine cauliflowers, new potatoes of good size for table use, pie-plant of different varieties, &c. There was a handsome display of roses and other flowers, which, under the direction of that zealous florist, Dr. THOMPSON, assisted by several devoted lady amateurs, made a most attractive appearance. The collection of roses, from the garden of DAVID THOMAS, Greatfield, near Aurora, for which he received the premium, was particularly fine. There were several splendid bouquets and ornaments of different kinds, composed of flowers. A beautiful "floral design," somewhat unique in its character, was presented by Mrs. E. T. THROOP MARTIN, of Auburn. The flowers, comprising many varieties, were beautifully and tastefully blended, and pressed in a frame under glass in such a manner as to resemble, at a little distance, a splendid painting. Being kept from the air they do not quickly fade, but retain for some time their fresh natural tints.

The occasion called together quite a numerous assemblage of persons of both sexes; and not less interesting to us than any other part of the exhibition, was the kind social feeling, and the spirit of generous rivalry in the improvement of the products of the garden and orchard, which appeared to be generally diffused. The Aurora Horticultural Society has existed but for a few years, though the community here, through the influence of some distinguished cultivators, has long been celebrated for rural taste, and for the production of choice fruits.

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BLIGHT IN FRUIT TREES.—In our last number, we spoke of a blight in apple trees, similar to the "fire blight." Since then, we have noticed, in a tour through several counties in western New-York, that the apple, pear, quince, and in several instances, thorns of various kinds, are more or less affected by the malady mentioned. Some believe it to have been occasioned by a frost, which, it is said, occurred a few nights previous to its first appearance. On the night alluded to, it was expected by many that there would be a frost, which, by fishermen and others who were out at twelve or one o'clock, was found to have taken place to such a degree that the leaves of trees were frozen, and the grass was crisp under foot; but a south wind which set in about the middle of the night, so raised the temperature that before sunrise the next morning, the frost had all been dissipated, leaving vegetation apparently uninjured. At present, it is difficult for us to reconcile with this conjecture, all the facts connected with the blight. Trees are attacked in some situations, where it is pretty certain, from close observation, that no frost occurred for two or three weeks before the appearance of the blight. Dr. HERMAN WENDELL, of this city, lately showed us a small pear tree which was brought from the interior of France last fall, and was not unpacked till very late last spring, the planting being purposely deferred till late in the season, in order to be certain of mild weather afterwards. Dr. W. is confident that no frost has occurred since the tree was set, as the most tender plants in the garden have exhibited none of its effects, but the tree is badly affected by blight, and will be probably ruined. For ourselves, we must wait for more knowledge and more facts, before we shall venture any conclusion in regard to the cause of the malady in question.

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SALT FOR PLUM TREES.—Judge CHEEVER, has called on us to say that he had lost three plum trees in consequence of putting salt round them. The trees were from two to three inches in diameter, and he used two quarts of salt to each,. He was induced to apply the salt in consequence of having seen it recommended as a remedy for certain diseases in the plum tree, and as a promotive, also, of their growth and thrift. As to the quantity, he *thought* he had seen it advised in the *Cultivator*. In this we think he must have been mistaken, as we can find nothing of the kind. In the

Horticulturist for December, is a communication from S. A. Shurtleff, M. D., of Brookline, near Boston, in which he states that in the winter of 1839-'40, he gave each of his plum trees a "dressing of about two quarts of salt." He was careful, however, not to put it nearer than a foot to the body of the tree. The salt was that which had been used for pork, and he cautioned the gardener not to use the brine; but he notwithstanding, did use about a gallon of it round one tree, which killed it. Dr. S. states that he used salt in the same way the next season, and, as he thinks, with beneficial results, so much so that he is "fully convinced that it is, if properly and judiciously used, a sure preventive of both the fungus [*black knot* or *wart*,] and the curculio." We should be glad to hear from others who have tried salt for plum trees, and hope results will be furnished for the benefit of the public. It is in this way only that we can ascertain with certainty the specific operation of any substance.

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SIZE OF CHERRIES.

In the larger fruits, as apples or pears, magnitude is usually regarded as the first excellence, and fine quality next; huge, coarse fruits being often preferred to those of moderate size, though of the most delicious flavor. In other words, *show* is considered more desirable than real merit. Among smaller fruits, as cherries and strawberries, where gathering is a chief labor, it becomes quite important to procure if possible, those of a respectable size. For market, a cherry of a fine showy appearance, will command a price nearly double that of one of only a medium aspect. The present season, fruit pedlers paid five dollars per bushel on the tree for the Napoleon Bigarreau, more readily than three dollars for fruit of a medium size, though of better quality.

To those who have not made careful comparison of the various sizes of cherries, measurements of the dimensions of some of the more celebrated sorts may prove useful and interesting. They are taken from fair specimens under good culture—not larger than may be found in large numbers on every healthy and vigorous tree.

LARGE CHERRIES.

Napoleon Bigarreau—this is perhaps the most uniformly large cherry as yet much cultivated—one inch wide, and twenty-three twenty-fourths of an inch long (from stem to apex.)

Black Tartarian—same size as the preceding, when under the best culture,—but more liable to vary to a smaller size.

Yellow Spanish—1 inch wide, 7-8ths long.

Large White Bigarreau—15-16ths wide, and 1 inch long.

Holland Bigarreau—one thirtieth less each way than the last.

Downton—11-12ths of an inch wide, and 7-8ths long.

Carnation—11-12ths wide, and 4-5ths long.

Large English Morello—11-12ths wide and long.

Knight's Early Black—23-24ths wide, 7-8ths long, 3-4ths thick.

Belle Magnifique—same size as the last.

Black Eagle—23-24ths wide, 4-5ths long.

Florence—23-24ths wide, 3-4ths long.

Elk Horn—7-8ths wide and long.

MEDIUM IN SIZE.

American Heart—7-8ths wide, 19-24ths long.

Sparhawk's Honey—19-24ths wide, 3-4ths long.

Gridley—nearly 7-8ths wide, 3-4ths long.

Downer's Red—5-6ths wide, 3-4ths long.

Madison Bigarreau—same size as last.

Belle de Choisy—7-8ths wide, 3-4ths long.

Early Purple Guigne—7-8ths wide, 19-24ths long.

May Bigarreau—largest specimens. 3-4ths wide and long.

The Napoleon Bigarreau, from its large size, great productiveness, and firm flesh, is eminently fitted for marketing, though of only second rate flavor. The Black Tartarian, not less productive, is usually a little less in size, and on old trees much less; but excels the former in flavor. The Yellow Spanish is nearly as large as the Napoleon, and rather superior in quality, and is besides a fruit of great beauty. The Early purple Guigne and May Bigarreau, though not so large nor so fine as many others, will always be valuable for market, from their very early maturity, being one or two weeks sooner than almost any other variety. Among those of large size, and of the very finest flavor, may be named Knight's Early Black, and Black Eagle, Downton, American Heart, Large White Bigarreau, Downer's Red, Florence and Sparhawk's Honey.

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Protection of Fruit.—"Well, well," said the old man, "if neither words nor grass will do, I must try what virtue there is in stones."

Moral.—"If good words and gentle means will not reclaim the wicked, they must be dealt with in a more severe manner."—*Noah Webster.*

Much has been said and written upon the subject of protecting fruit from being stolen, and many laws have been enacted for the same purpose; but still I presume all persons who have attempted to cultivate choice fruit have been more or less annoyed by having their fruit pilfered by school boys and loafers, and sometimes by persons who would not like to be classed with either. Writers upon the subject of Fruit Culture have suggested various remedies for this evil, but so far as I recollect, I have never seen one that I thought would be effectual in accomplishing the object. The idea of making fruit so plenty as to prevent its being stolen is impracticable, for the reason that so long as there is one variety better than another, it will be a sure mark for the pilferer. Fences and walls can hardly be built that will be a sufficient protection, without they are so expensive as to preclude their general adoption, and dogs and hedges cannot be said to be always sure of accomplishing the object. Living in a village where are several large public schools, in which, "respect for a neighbor's fruit," it would seem, is not one of their studies, I have formerly suffered and been much annoyed by having my fruit stolen—particularly my choice early fruit. A remedy, which I have proved for several years, but which is not original with me, I have found entirely satisfactory, and can recommend it to all fruit culturists, as cheap, safe, and sure. A few applications in each season will correct the worst neighborhood. The remedy is this: Procure from some druggist an ounce of tartar emetic; dissolve a small quantity in warm water; then select some choice specimens of fruit on the trees you wish to protect, and dip the fruit into the preparation, marking the fruit in some way that you will know yourself. A person after once trying fruit well prepared in this manner, seldom, if ever, has a relish for more; in fact, it gives him a sort of a loathing of even the sight of the tree, so that he will never approach it the second time with a view of stealing your fruit. This remedy is simple, and easy of application, and sure of producing the effect desired, and is applicable alike to all fruits, whether small or large. J.

☞ The *Ohio Cultivator* asks if there was not some mistake in the recipe for making soap, published in our January number. There was a mistake in giving *one ounce* of soda instead of *one pound*. The error, however, was corrected in the March number, and we are sorry our friend did not read with sufficient attention to discover it.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received during the past month, from A. M., Equus, Prof. Horsford, L., Augusta, A Farmer, B. D. Laighton, Geo. Hapgood, S. M. Brown, W., F. G. Ruffin, N. H., H., Wm. Jennison, B. Hubbard, A Subscriber, D. L. Suydam, Wm. R. Prince, Dr. M. W. Philips, Caius, S., A. Doubleday, Bailey, H. A. P., C. H., A. of the North, W. Bacon.

Books, Pamphlets, &c., have been received as follows:—First Report of the Trumbull (O.) Co. Ag. Society, from F. E. Stowe, Esq.——Turnep Husbandry: a series of papers on the Culture and Application of that important root. By David F. Jones, with a Preface by Prof. Johnston. From the author, Edinburgh, Scotland. A most valuable treatise, to which we shall often have occasion to refer, and for which the author will please accept our thanks.——The numbers of the *London Agricultural Magazine*, for Jan., Feb., March, and April. From the Editor, F. Crisp, Esq.——Proceedings of the Agricultural and Mechanical Association of Louisiana, from B. M. Norman, Esq.——Account of the June Exhibition of the Long Island Hort. Society at Flushing, from G. Winter, Esq.——Strawberries measuring 3¼ to 4¼ inches in circumference, from Messrs. Tilden & Co., New-Lebanon.——The *Edinburgh Courant*, containing the Proceedings of the Highland Ag. Society of Scotland, from some unknown friend.——Dealings with the firm of Dombey & Son, parts 8 and 9, from the publishers, Lea & Blanchard, Philadelphia.——The Pig: a treatise on the breeding, Management, Feeding, and Medical Treatment of Swine, by Wm. Youatt. From the Publishers, Lea & Blanchard, Philadelphia.——Agricultural Botany, by Wm. Darlington, M. D., from the Author.

Death of the Editor of the Southern Cultivator.—It is with much regret that we hear of the death of James Camak, Esq., late editor of the *Southern Cultivator*. He died at his residence in Athens, Georgia, on the 16th of June last, at the age of 52 years. Mr. Camak was widely known as an able agricultural writer, and for several years has conducted the journal named, in a style which has eminently entitled it to the respect and patronage of the public, and through which his labors have been highly beneficial. We have no doubt that his death is, as a cotemporary observes, a public loss, which will be deeply regretted by all who knew him.

Large Fleece.—J. H. Reid, Esq., of Fredericton, New-Brunswick, a gentleman who has been indefatigable in his efforts for the improvement of all kinds of farm stock in that Province, informs us that he has a Lincoln ram, one year old, whose fleece, this year, weighed 12¼ lbs. Mr. R. also has the pure Leicester sheep, and the Berkshire, Sussex, and Mackay pigs. He prefers the Berkshires, and says that he can make one half more pork on the same feed, with this breed, than with any other. Of Poultry, he has several kinds, including the Dorkings, Bucks county, and Spanish, and he likes the latter best.

Hawthorn Hedges.—We have remarked that the Hawthorn does not appear to succeed well for hedges, in the Eastern States, and along the banks of the Hudson river. It is subject to a blight which strikes it in August, and by which it is often much injured. Noticing, lately, some very healthy hedges of this thorn in Western New-York, we inquired the course which had been pursued with it. We were told that it had been always free from disease, and made a rapid growth. At the residences of G. V. Sackett and F. J. Swaby, Seneca Falls, we noticed very fine Hawthorn hedges. The soil where they stood, was rather flat and compact, and we should think would be surcharged with water at certain seasons of the year. Mr. S. informed us that trenches two feet deep, were dug and nearly filled with gravel, some loam being laid over it, till a slight ridge was formed, on which the hedge was planted. This was all the preparation, and we were told that all the hedges in this section so planted, had succeeded perfectly. We have no doubt of the advantage of this treatment in such soil as is mentioned; but do not recommend it in all cases.

Short Horns for Canada.—R. N. Watts, Esq. of Grantham, Eastern township, Canada East, has lately purchased of E. P. Prentice, Esq., a Short-Horned cow and heifer. The cow, *Peggie*, is five years old, was by *Fairfax*, dam *Splendor*. She is fine in form, and has superior dairy qualities. The heifer, *Maggie*, is two years old, by *Fairfax*, dam *Aurora*. She is of good size and very superior points. For beauty of appearance and intrinsic value, no animals which we have known taken to our Canadian neighbors, are entitled to higher commendation than these.

Sale of Col. Sherwood's Stock.—We trust it will be remembered by breeders and all persons interested in the improvement of cattle or sheep, that Col. Sherwood's sale is to take place on the 8th of September next. A catalogue, containing the ages and pedigrees of the cattle, will be found in our advertising pages. Since the publication of our last number, we have seen his stock. We had previously seen but a few of the cattle, and but a small proportion of the sheep. Of the former, there are forty-five head of full blood Short-Horns, forty of which are to be sold without reserve. Among this number of animals, it is, of course, to be expected that there will be some variation of character and quality; and though it would be manifestly improper for us to particularize, we may be allowed to say that the well known popularity of the herd is supported by a critical examination. Many of the animals we consider of very superior excellence; and yet it is by no means impropable—such are the different opinions and fancies in regard to stock—that were we to designate our favorites, they would not be those which most purchasers would prefer. We therefore earnestly advise those who wish to procure good stock, to attend the sale in person and choose for themselves. The herd is in good condition—not clothed in *artificial* fat; but in just that state of thrift which good animals, fairly wintered, ought to show at the season of the year, (last of June,) when we examined them. It is Col. S.'s intention to restrict their food to grass only; but on his pastures we have no doubt they will make a rapid gain before the time of sale arrives.

It will be seen that Col. Sherwood offers at public sale a hundred Merino rams, sixty Merino ewes, and several South Down rams. We had the opportunity of making a pretty close examination of all his sheep, having witnessed the shearing of nearly the whole flock—the fleeces being put up and weighed separately, under our own eye. The general quality of the wool is indicated by the prices it has brought, for several years, being from thirty-nine to forty cents per pound. The present year's clip is unsold; but it is of better average quality than any previous one, in consequence of the relative increase of the finer wooled stock. The flock comprises two or three families, the older individuals of which were bred by themselves. Thus there is what is called the "Yates flock," originally purchase of Mr. **Yates**, of Otsego county, which does not produce as fine wool as his other families, but are large-bodied, strong, hardy sheep, bearing heavy fleeces; and would be a valuable stock to carry to the prairies, or to sections where they would be subjected to considerable exposure and rough fare.

The following memorandum shows the weight of the fleeces of the different classes of ewes in the flock for the present year. They were washed on the 19th of June, shorn on the 28th, 29th, and 30th of that month.

Yates family,	22 ewes,	106 lbs.	8 oz.	averag'g	4lbs.	9 oz.
Jewett do	13 do	48	14	"	3	12
Old flock,	25 do	81	14	"	3	4 2-5
Blakeslee family, 110 of which 47 were yearlings, 20 two-years-old, and 43 *aged*.		438	9	"	3	15¾
Sixty-four rams, Blakeslee family, of which 44 were yearlings, 11 two-years-old, and nine over that age.		340	6	"	5	5¼

In the Blakeslee family of ewes, there was one double fleece, (5 lbs. 6 oz,) and in the rams of that family two double fleeces, (16 lbs., and 12 lbs. 6 oz.) The above averages are exclusive of floor-locks—adding those, the total average is 4 lbs. 4 1-16 oz.

☞ Some of Col. S.'s fleeces have been left with B. P. **Johnson**, esq, Secretary of the N. Y. State Agricultural Society, at the Society's rooms, old State Hall, where they may be examined.

The South-Down rams offered for sale by Col. S., are a capital lot, and will furnish an opportunity which other breeders of this valuable breed of sheep should improve, to obtain superior animals.

Fine Strawberries.—Messrs. **Tilden**, of New-Lebanon, will accept our thanks for some handsome specimens of Hovey seedling strawberry. The measurements of some of the berries were 4¼, 4, 3¾, 3¼ inches in circumference.

Morgan Horse Gen. Gifford.—**Squire M. Brown** writes us:—"The *General Gifford* is doing well here. We select for him the best mares we have, and expect to rear from him a stock of horses of which we may justly be proud." Passing through Camillus a few weeks since, we had an opportunity of seeing this horse. He is an animal of great substance, spirit and action. He is heavier than many horses which appear to a cursory observer to be considerably larger. His precise weight, as we were informed by Mr. **Munro**, one of his owners, is 1,040 pounds. His patronage is even greater than is desired.

Seed of the Tulip Tree—*Liriodendron Tulipifera.* Information is wanted in regard to the mode of rearing this tree from seed. If any of our correspondents can furnish this information, they would confer a favor.

Black Hawk and Sir Henry.—In our July number, we published a communication from Messrs. **Sanderson** & Co., of Burlington, Vt., in reference to the challenge of Messrs. **Hill**, of Bridport, contained in their advertisement in our May number. Messrs. S. & Co., as will have been seen, propose to exhibit their horse Sir Henry, against Black Hawk, on the condition expressed by the question—"*which is the best horse, as a getter of roadsters?*" The principles by which the question should be settled, to be, substantially, the points and appearances of the horses and their progeny—the same to be judged of by individuals mutually agreed on.

We have received a note from Messrs. **Hill**, under date of 13th of July, requesting us to say that they will meet Sir Henry with Black Hawk at Saratoga, at the time of the Fair of the New-York State Agricultural Society—the points of excellence to be considered by the judges, to be as follows:

"1st, superiority of form; 2nd, ease and elegance of action; 3rd, greatest speed in trotting, to be tested by a match for the distance of ten miles—Black Hawk to be driven in harness, and his owners allowing Sir Henry to be either driven in harness or rode, and to have three minutes start. The horse, which in the opinion of the judges, excels in a *majority* of these requisites, to take the purse."

Messrs. **Hill** also say—"We are ready to meet Sanderson & Co. at Saratoga, and compare the merits of the stock of Black Hawk and Sir Henry, on sucking colts, yearlings, and two-year-olds—the purse to be from $100 to $200 each. This challenge to stand open six weeks."

Burr's Seedling Strawberries.—We invite attention to the advertisement of Mr. **Burr**, of Columbus, Ohio, describing his seedling strawberries. Most of the varieties have been highly recommended by committees of the Columbus and Cincinnati Horticultural Societies. The committee of the Columbus Society are of opinion that for the soil and climate of that region, at least, several of the seedlings are superior to any other varieties in cultivation.

ANSWERS TO INQUIRIES.

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Mediterranean Wheat.—C. P. Upperville, Va. This wheat has, so far as we have learned, done well in this State. You say it stands the winter and fly better than any other kind you have. Such, also, is its reputation here. It is about ten days earlier than most other kinds of winter wheat cultivated here. Millers, we are told, will not give so much for it by three to six cents per bushel, as for the best white wheat. As to the "favorite kind of wheat" here, we cannot say which it is. In Western New-York the White Flint, and **Soule**'s wheat are highly esteemed; but some kinds are best adapted to some sections or soils, and others to other sections.

Cultivators.—**A Farmer**, Liberty Mills, Va.—We know of no cultivator which will reduce stiff soil, to a state suitable for Indian corn, without a previous preparation by a plow. The cut of a cultivator given in our February number for 1846, was copied from an English work. We have seen one or two of that kind of implements, which were imported to this country, but have not known any like them made here. We should suppose, however, that they might readily be made from the cut, by any man accustomed to such work. We cannot say whether either of the other kinds of cultivators, for which you inquire can be had south of New-York; but we do not think either of them would be adapted to your stiff soil. [See an article on cultivators in this number.] As to a *plow for stiff-clay soil*, we do not think the one you inquire for, would be best. We are not, at present, certain what kind kind would be most suitable.

Lampas.—B. D. L., Stratham, N. H. This affection is most common in young horses, while they are shedding their teeth; and it is supposed to arise, frequently from inflammation of the gums, which spreads to the bars across the roof of the mouth, causing them to swell, sometimes beyond the level of the teeth, and preventing the horse from masticating his food. The pressure of substances taken into the mouth, on the inflamed or sore bars, occassions the horse pain, and he may refuse to eat any hard food. In ordinary cases, some laxative medicines will carry off the inflammation, and relieve the animal. It may, however, be expedient to lance the bars that are most swollen, which, causing a slight flow of blood, will soon reduce the fever and bring the parts to their natural condition. The practice of burning out the bars with a hot iron, is unnecessary and cruel.

NOTICES OF NEW PUBLICATIONS.

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Agricultural Botany; an Enumeration and Description of Useful Plants and Weeds, which merit the notice, or require the attention of American agriculturists, by **William Darlington**, M D.

This work is designed to promote among farmers a more precise knowledge of the scientific names and characteristics of those plants which more immediately require their attention, than is now generally possessed. It has been accomplished by a person well qualified for the task. Dr. **Darlington** is widely known as a botanist, who has before rendered the cause of agriculture efficient aid by his scientific labors. The work before us cannot fail of being highly useful. It contains a copious glossary, with an index of common names and synonyms, and such other facilities that there can be no difficulty in becoming familiar with the terms employed, nor in the investigation of the nature of the plants described.

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The Pig: A Treatise on the Breeds, Management, Feeding, and Medical Treatment of Swine; with directions for Salting Pork and Curing Hams: by **William Youatt**, V. S. Philadelphia, Lea & Blanchard.

A few months since, the sudden death of the able author of this work was announced in the English papers. He had, however, nearly prepared the work for the press, and it has been issued with but little delay. It was intended as the last of a series drawn up by Mr. Y., under the direction of the British Society for the Diffusion of Useful Knowledge, and of which the valuable volumes on "The Horse," "Cattle," "Sheep," "The Dog," are well known, and justly esteemed. That part of the work devoted to the natural history of the pig, and the description of the various breeds, is interesting, though it does not, perhaps, evince as much care and research on this point, as some of Mr. Y.'s previous writings. He seems to have directed his principal efforts in this instance, to the subject of the diseases of swine, and in this respect the work is of much value,—undoubtedly superior to anything of the kind which has before appeared. Mr. **Youatt** was an eminent veterinary surgeon, was editor of that highly useful work, the *Veterinarian*, was actively engaged in practice, and from his own observation was enabled to treat upon the nature and habits of animals which have heretofore been but little understood. Very useful directions are given in regard to the general management of swine, embracing the principles of breeding, fattening, &c., together with the directions for salting pork, and curing bacon and hams in the best manner. The engravings were drawn from life, by **Wm. Harvey**. A more particular notice of the contents of the work will be given next month.

NEW OXFORDSHIRE RAMS.

THE subscriber offers at public sale, on Wednesday, the first of September next, at his farm, (Marsh Mount,) near Delaware City, New Castle county, Delaware, twelve fine Long Wooled Shearling Bucks, the get of his imported Oxfordshire bucks, selected by himself out of the best flock in England, in 1815. and out of his best Leicester ewes. They will be numbered and sold by auction, without reserve, to the highest and best bidder. The sale will commence at 2 o'clock P. M. Terms cash. The subscriber will be pleased to see any gentleman who may favor him with his company.

C. B. REYBOLD.

August 1, 1847.—1t.

THE CULTIVATOR ALMANAC FOR 1848.

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We are now ready to receive orders for the **Cultivator Almanac** for 1848, being the fifth year of its issue. The astronomical calculations, which are made for New-York city, are by G. R. **Perkins**, Professor of Mathematics in the New-York State Normal School. In the variety of its contents, (consisting mainly of brief hints and suggestions on agricultural and horticultural matters, rural and domestic economy, &c.,) and in the number of its illustrations, it will be found superior to any of the previous numbers. It is furnished on the following terms: For 1,000 copies, $15—for 2,000 or more, $12.50 per 1,000—the purchaser to have the privilege of occupying the last page with advertisements, and his name inserted as publisher on the title page. Orders to be addressed to **Luther Tucker**, Albany.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, July 18. 1817.

FLOUR—The foreign news, which arrived yesterday, completely unsettled the market. Sales of Genesee were made before the announcement of the decline in England, at $6.12½. At the close of the market there were buyers at $5 , and sellers at $5.50, but no sales reported.

GRAIN.—Wheat, prices unsettled. A quantity of Ohio white was sold, after the news, to fill up a vessel, at $1.22. Corn exhibited a decline of about 10 c. per bushel. Northern yellow may be quoted at 60*a*62½c. Rye, nominal. Oats, 38*a*40c.

BUTTER—Orange County, per lb., 18*a*19c.—Western, dairy, 13*a*15 cents

CHEESE—In casks and boxes, per lb., 6*a*7½c.

BEEF—Mess, per bbl., $13.*a*$13.50—Prime, $9*a*$9.50.

PORK—Mess, per bbl., $15—Prime, $9*a*9 50.

HAMS—per lb., smoked. 9½*a*11cts.

LARD—Per lb 9½*a*10½c.

HEMP—American, dew-rotted, per ton. $100*a*$110.

COTTON—New Orleans and Alabama per lb., 10*a*14c.—Upland, 10*a*12¾c.

WOOL—(Boston prices,) July 17.

Prime or Saxon fleeces, washed per lb.·······	45*a*50	cts.
American full blood fleeces,.....................	40*a*45	"
" three-fourths blood fleeces,.........	35*a*38	"
" half blood do	32*a*33	"
" one-fourth blood and common,.....	28*a*30	"

Remarks.—Since our last, there have been two arrivals from England—the Caledonia on the 4th, and the Brittannia on the 17th of July. A further decline in breadstuffs is announced by both. A letter dated Liverpool, July 4th, says—

"A signal depression has taken place in the corn market since the departure of the last steamer, attributable to many causes, but peculiarly to the prevalence of fine weather and the growing steadiness of the money market. Prices have become low beyond precedent. Large quantities of American flour were sold at 34s. per bbl., but that is a price which could not be realized for any considerable quantity to-day. Richmond and Alexandria are quoted at 33s. per bbl.; Philadelphia and Baltimore 32s. New Orleans and Ohio 31s.; and U. S. and Canada sour from 28s. to 29 s. per bbl Indian corn has likewise suffered a material depression, and cannot be quoted higher than 44s. 6d., to 45s. per quarter. Inferior, sound, ranges from 32s. upward. Indian meal stands at 20s. to 21s per bbl. of 196 lbs, The rumors of the potato disease are exceedingly conflicting and not reliable, and the growing crops are in a state of the utmost forwardness; the weather could scarcely be more favorable than it is."

The above prices are equal to about $7.75 per bbl. for Ohio, and $8.25 for Richmond and Alexandria flour; and about $1 to $1.40 per bushel for Indian corn. A rise in cotton is announced, but to what degree it has affected our markets, has not transpired.

GENEVA AGR'L FOUNDRY AND SHOPS.

THE subscriber has recently put in operation a new **Foundry and Machine Shop**, intended chiefly for the manufacture of **Agricultural Implements**. A number of valuable improvements in various farming tools having been made and patented by his predecessor, (T. D. Burrall,) this establishment has been erected for the manufacture of *these* and such other implements as the market may require, and in order that purchasers may depend upon a genuine and well finished article. Among other things he has now on hand

Burrall's Patent Threshing and Clover Machines and Horse Powers
" " Shell Wheel Plows, greatly improved the present season.
Burrall's Patent Corn Shellers, Nos. 1 and 2, do. do.

Also, Subsoil, Corn, and Shovel Plows, Straw Cutters, of various kinds, Scrapers, Plow Points, Trimmings, &c., &c.

He intends adding to his present stock from time to time, by selections from the best articles in market; all which will be got up in the best style, and sold, wholesale and retail, on reasonable terms.

Mill Gearing, Castings of all kinds, pattern-making, &c., &c., executed on short notice.

E. J. BURRALL.

Geneva, August 1, 1847.—4t.

CATALOGUE OF IMPROVED SHORT-HORNED CATTLE AND MERINO SHEEP.

To be Sold on the 8th of September, 1847.

LIST of the herd of J. M. SHERWOOD, to be sold at auction, at his residence in the town of Auburn, on, Wednesday, 8th Sept., 1847, at 10 o'clock, A. M.

N. B. (C. H. B.) refers to Coates' Herd Book; and (A. H. B.) to American Herd Book.

Several of the cows have not yet calved, but will before the day of sale.

All the cows will be bulled by Symmetry, except when they are mentioned to the contrary.

In the Supplement will be found the pedigrees of the several bulls, which got the stock offered for sale; *they will be referred to* by *Roman Capitals*.

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No. 1. *Stella.*—A white and red cow bred by Francis Rotch, Esq., of Butternuts, calved July, 1836, got by North Star. (C. H. B.,) 2382—Dam, Stately, by Young Denton, 963; g. d., Harriet, by Denton, 198; g. g. d., Henrietta, by Comet, 155; g. g. g. d., Hannah, by Henry, 301; g. g. g. g. d., by Danby, 190; g. g. g. g. g. d., by son of Favorite. This cow is a good milker, and received the prize as the best cow, at the N. Y. State Ag'l. Society's Exhibition at Syracuse, in 1841, and at Albany in 1842.

No. 2. *Sylph.*—A red and white cow, calved in July, 1841; got by "Archer," (A.) (C. H. B.,) No. 3028. (A. H. B,) No. 10—Dam, Stella, No. 1.

No. 3 *Sibyl.*—A red and white cow, calved in December, 1842; got by Archer, 3028, (A.)—Dam, Stella. No. 1.

No. 4. *Saltillo*,—A white roan *bull* calf, calved March, 1847; got by Symmetry, (B.)—Dam, Stella, No. 1.

No. 5. *Santa Anna.*—A red and white bull calf, calved in April, 1847; got by Symmetry, (B.)—Dam, Sylph, No. 2.

No 6. *Sweetbriar.*—A red and white heifer, calved in April, 1846; got by Arrow, (C) (A. H. B.,) No. 11—Dam Sibyl, No. 3.

No. 7. *Seneca Chief.*—A roan bull calf, calved in April, 1847; got by Symmetry, (B.)—Dam, Sybil, No. 3.

No. 8. *Delight.*—A white cow, bred by Francis Rotch, Esq., of Butternuts, calved May, 1835; got by Devonshire, (D.) (C. H. B.) 966, and (A. H. B.,) 51—Dam. Daisy, by Admiral, (C. H B.) 1608; g. d., Yellow Rose, by Young Denton, 963; g. g. d. Arabella, by North Star, 460; g. g. g. d. Aurora, by Comet, 155; g. g. g. g. d., by Henry, 301; g. g. g. g. g. d., by Danby, 190.

No. 9. *Milcha.*—A cow, in color white, with red ears and muzzle, calved April, 1842; got by May Duke, (E.) (A. H. B.,) 102—Dam, Delight, No. 8.

No. 10. *Dahlia*—A white cow, calved July, 1843; got by Archer, 3028, (A.)—Dam, Delight, No. 8.

No. 11. *Diana.*—A white heifer calf, calved March, 1847; got by Symmetry, (B.)—Dam, Delight, No, 8.

No. 12. *Miami*,—A cow, in color white, with red ears and muzzle, calved April, 1844; got by Archer, 3028, (A.)—Dam, Milcha, No. 9.

No. 13. *Maid of Auburn.*—A white heifer, calved March, 1845; got by Archer, 3028, (A.)—Dam, Milcha, No. 9.

No. 14. *Daphne.*—A white heifer, calved April, 1846; got by Mr. George Vail's bull, Meteor, full brother to my bull Symmetry—Dam, Dahlia, No. 10.

No. 15. *Dandelion.*—A red and white heifer calf, calved May, 1847; got by Symmetry, (B.)—Dam, Dahlia, No. 10.

No. 16. *Daffodil.*—A red and white heifer calf, calved May, 1847; got by Symmetry,—Dam, Dairy Maid, out of Delight, No. 8, and by Archer, 3028, (A.)

No. 17. *Mohawk.*—A white bull calf, calved April, 1847; got by Symmetry, (B.)—Dam, Miami, No. 12.

No. 18. *Norna.*—A red and white cow, a splendid milker, bred by H. S. Randall, Esq., of Cortland village, calved December, 1840; got by Volunteer, (bred by F. Rotch, Esq, (C. H. B.,) 5578,—Dam, Niobe, bred by F. Rotch, Esq., by American Comet, 1638; g. d., Norah, by Frederick, 2038; g. g. d., Nonpareil, by Young Denton, 963; g. g. g. d., Arabella, by North Star, 460; g. g. g. g. d., Aurora, by Comet, 155; g. g. g. g. g. d. by Henry, 301; g. g. g. g. g. g. d. by, Danby, 190.

No. 19. *No-See.*—A roan heifer, calved March, 1845, (bulled in 1847 by Pontoosic, No. 26,) got by Archer, 3028, (A.)—Dam, Norna, No. 18.

No. 20. *Naid.*—A red and white heifer, calved April, 1846; got by Archer, 3028, (A.)—Dam Norna, No. 18.

No. 21. *Nebo.*—A roan bull calf, calved May, 1847; got by Symmetry, (B.)—Dam, Norna, No. 18.

No. 22. *Philipena.*—A white cow calved in March 1842. This cow took the prize for the best cow at the State Fair at Utica, in 1845. Got by Archer, 328.(A.)—Dam, Pansy 2d, (bred by the Hon. S. Van Rensselaer, of Albany.) This cow took the prize for the best cow at the State Fair at Rochester, in 1843;) by Ajax, (C. H. B.) No. 2944, (bred by Hon. S. Van Rensselaer,) g. d. Sprightly, by Washington, 1566; g. g. d., Pansy, (imported by Hon. S. Van. Rensselaer,) by Blaize, 76; g. g. g. d., Primrose, by Charles, 127; g. g. g. g d., by Blythe Comet, 85; g. g. g. g. g. d., by Prince, 521; g. g. g. g. g. g d., by Patriot, 496.

No. 23. *Pocahontas.*—A roan cow, calved in January, 1844; got by Archer. 3028. (A.)—Dam, Pansy 2d. For full pedigree, see Philipena, No. 22, being a full sister.

No. 24. *Owasco.*—A white bull calf calved April, 1847; got by Symmetry, (B.)—Dam, Pansy 2d. See pedigree of No. 22.

No. 25. *Potowatamie.*—A red and white cow, calved in June, 1844; got by Arrow, (C.)—Dam, Philipena, No. 22.

No. 26. *Pontoosic.*—A roan bull calved in August, 1846; got by Symmetry. (B.)—Dam, Philipena, No. 22.

No 27. *Pontiac.*—A roan bull calf, calved May, 1847; got by Symmetry, (B.)—Dam, Pocahontas, No. 23

No. 28. *Puebla.*—A roan bull calf, calved May, 1847; got by Symmetry, (B.)—Dam, Potowatamie, No. 25.

No. 29 *Lillias.*—A white cow, calved in September, 1841; got by May Duke, (A. H. B. 102,)—Dam Lilly, [American Herd Book, page 195,] by Windle, (C. H. B.,) 5667; g. d., Netherby,* by Monarch, 4494; g. g. d., Sweetbriar, by Barnpton, 54; g. g. g. d., Roseberry, by Western Comet, 689; g. g. g. g. d., by Comet, 155; g. g. g. g. g. d., by a son of Favorite, 252; g. g. g. g. g. g d. by Cupid, 177; g. g. g. g. g. g. g. d., by Favorite, 252.

No. 30. *Lois*—A roan cow, calved in December, 1842; got by Archer, 3028, (A.)—Dam, Lilly. Half sister to Lillias, No. 29. See pedigree of No. 29.

No 31. *Lalla Rookh.*—A white cow calved in January, 1844; got by Archer, 3028, (A.)—Dam Lilly. For pedigree see No 29.

No. 32. *La-Quae.*—A roan cow, calved in January, 1845; got by Archer, 3028, [A.)—Dam, Lilly. For pedigree, see No. 29

No. 33.—A calf not yet born; got by Symmetry, (B.)—Dam, Lilly; for pedigree see No. 29.

No. 34. *La-Annah*—A white heifer, calved June, 1846; got by Archer, 3028, (A.)—Dam, Lillias, No 29.

No. 35. *Cayuga*—A white bull calf, calved July 1st, 1847; got by Symmetry, (B.)—Dam, Lillias, No. 29.

No. 36. *Lilac.*—A red and white heifer, calved June, 1845; got by Arrow, (C.)—Dam, Lois, No. 30. Bulled by Pontoosic, No. 26.

No. 37. *La-Juste.*—A white roan heifer, calved September, 1846; got by Symmetry, (B.)—Dam, Lois, No 30.

No. 38.—A calf not yet born; got by Symmetry, (B.)—Dam, Lois, No. 30.

No. 39. *La-Mode*—A white heifer, calved April, 1846; got by Mr. Vail's Meteor, (A. H. B.) 104—Dam, Lalla Rookh, No 31.

No. 40.—A calf not yet born; got by Symmetry, (B.)—Dam, Lalla Rookh, No. 31.

No. 41. *La-Maria.*—A heifer calf, white, got by Symmetry, (B.)—Dam, La-Quae, No. 32.

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Pedigrees of Grade Cattle, which will be offered for sale after the sale of the above mentioned Cattle.

No. 1. *Admiral 2d.*—A red and white cow, calved in 1842; got by Archer, 3028, (A.)—Dam, Admiral 1st. Admiral 1st was bred by L. F. Jenkins, Esq., of Canandaigua, out of one his best Cows, by his bull Admiral.

No. 2. *Admiral 3d.*—A red and white cow, calved in 1843; got by Archer, 3028, (A.)—Dam, Admiral 1st.

No. 3. *Admiral 4th.*—A red and white calf, calved in 1846; got by Arrow, (C.)—Dam, Admiral 3d.

No. 4. *Admiral 5th.*—A white heifer calf; got by Symmetry, (B.)—Dam, Admiral 2d.

No 5. *Snow Drop*—A white heifer, calved in 1845; got by Archer, 3028, (A.)—Dam, a roan cow bred by myself, got by Copson, (C. H. B.,) 3482, and out of an imported cow of the Tees Water variety

No. 6. *Fanny Elsler.*—A roan cow, calved in 1844; got by Arrow, (C.)—Dam, a roan cow, bred by H. S. Randall, Esq., out of a New Leicester cow.

No 7. *Spot.*—A red and white heifer calf, got by Symmetry, (B.)—Dam, the same as No. 5.

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SUPPLEMENT

The Pedigrees of the Bulls referred to in the Catalogue.

(A.) *Bull Archer*. 3028.—Was bred by Francis Rotch, Esq., of Butternuts, N. Y.; got by Rolla, [C. H. B.,] 4991.—Dam, Adaliza, imported from the herd of Mr. Whittaker, by F. Rotch, Esq., got by Frederick. 1060; g. d., Adelia, by Orpheus, 473; g. g. d., Alfreda, by Alfred, 23; g. g. g. d., Strawberry, by Windsor, 698; g. g. g. g. d., Old Daisy, by Favorite, 252; g. g. g. g. g. d., by Punch, 531; g. g. g. g. g. g. d., by Hubback, 319.

(B.) *Bull Symmetry.*—Roan, was bred by Geo. Vail, Esq., of Troy, and got by his imported bull Duke of Wellington, [C. H. B.] 3654, and [A. H. B.] 55, from the herd of Thomas Bates, Esq., of Yorkshire, England—Dam. Duchess, also imported from the same herd, by Duke of Northumberland, 1940; g d Nonsuch 2d, by Belvidere, 1706; g g d Nonsuch, by Magnet, 2240; g g g d by Major, a son of Minor, 441; g g g g d Old Sally, by a grandson of Favorite, 252; g g g g g d by Punch, 531; g g g g g g d Hubback, 319.

N. B. Mr. Vail's Bull Meteor is of the same pedigree.

(C.) *Bull Arrow.*—Red and white, was bred by Thomas Hollis, Esq., of Gilbertsville, N. Y.; got by Bertram 2d, [C. H. B.] 3144, and [A. H. B.] 21—Dam, Adeline, by Memnon, 2297; g d Adaliza, by Frederick, 1060; g g d Adelia, by Orpheus, 473; g g g d Alfreda, by Alfred, 23; g g g g d Strawberry, by Windsor, 698, g g g g g d Old Daisy, by Favorite, 252; g g g g g g d by Punch, 531; g g g g g g g d by Hubback, 319.

(D.) *Bull Devonshire.*—Was bred in England, by Mr. Whitaker; got by Frederick, 1060—Dam, Dulciana, by Enchanter, 244, g d Red Daisy, by Major. 398; g g d by Windsor, 698; g g g d Old Daisy, by Favorite, 252; g g g g d by Punch, 531; g g g g g d by Hubback, 319.

(E.) *Bull May Duke.*—Bred by Hon. Adam Ferguson, Watertown, Canada West, the property of L. F. Allen, Esq.; got by Agricola, 1614; Dam, Cherry, by Dunstan Castle, dam, by a son of St Albans, 2584; g g d by St. Albans, 2584; g g g d by Lawnsleeves, 365.

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* Windle and Netherby were both imported by Messrs. LeRoy and Newbold, of Avon, N. Y.

MERINO SHEEP.

The following RAMS will be offered.

No.	Age.	Weight of fleece, 1847.		No.	Age.	Weight of fleece, 1847.	
1	1	4 lbs.	8oz.	33	1	4	2
2	2	7		34	1	3	12
*3	7	5	4	35	1	5	6
*4	4	6		36	2	6	2
*5	not offered.			37	1	3	8
*6	do.			38*	1	4	14
7	1	7	8	39	1	4	14
8	1	5	12	40	1	3	10
9	1	4	2	41	1	3	10
10	1	2	5	42	8	6	12
11	1	4	9	43	1	3	7
12	1	3		44	1	3	4
13	1	4	8	45	2	8	7
14	1	4	12	46	2	6	
*15	4	8		47	not offered.		
16	2	4	6	48	1	3	9
17	1	4	10	49	1	4	7
18	2	5	11	50	1	4	2
19	1	3	8	51	1	5	3
20	1	3	12	52	1	4	7
*21	3	9	3	53	1	4	4
22	1	4	2	54	1	4	4
*23	1	5	6	55	1	4	4
24	1	3	12	56	1	5	3
25	2	6	12	57	1	4	4
*26	7	8	8	58	1	4	10
27	1	4	10	59	2	5	6
28	1	5	7	60	1	4	
29	1	3	11	61	1	4	6
30	2	7	4	62	2	5	10
31	1	4	8	63	2	6	8
*32	3	7	14	64	1	3	9

In addition, about forty Merino ram lambs will be sold. These rams are all of my own breeding, and were got by my rams Yankee, Pedlar, and Mr. Williams' Grandee, except those marked with a star. Yankee and Pedlar were bred by Mr. Blakeslee.

My Merinos consist of four families, viz: the Blakeslee family, the Yates family, the Jewett family, and the Marsh family.

The Blakeslee sheep were purchased of J. N. Blakeslee, of Watertown, Conn. This tribe of Merinos is well known all over the United States, and is unrivalled for their fineness of fleece, and general superior character. At present no pure Merinos stand so high; their fleeces, carcass, and constitution, being of the highest class. My bucks, Yankee and Pedlar are of this family, and were bred by Mr. Blakeslee.

Mr. Williams' Grandee was bred by D. C. Collins, Esq., of Hartford, Conn., and was got by Mr. Collins' imported buck Grandee, out of one of Mr C.'s imported Rambouillet ewes. These sheep were imported by Mr. C. from the far-famed royal flock of Merinos owned by the French government, and kept and bred at Rambouillet. These are now widely known throughout the U. S. Mr. Taintor, of Hartford, Conn., who last year imported some sheep of the same blood, has sold ram lambs at prices reaching as high as $200 per head.

I shall also offer sixty Merino ewes. They are of the same families as the rams, and of the same character. Also 30 grade Merino ewes.

I have taken six clips of wool, and four of them have been sold at 40 cts., the one of 1846 for 39, delivered at my own house, and the clip of 1847 unsold. The clip of 1846 averaged over 4 lbs. per head; that of 1847 averaged 4 lbs. 6 oz per head, all clean washed wool.

Samples in whole fleeces, may be seen at the State Agricultural Rooms, Albany, and A. B. Allen's Ag. Store, 187 Water-st., New-York.

SOUTH DOWN RAMS.

Fifteen to twenty-five South Down Rams and Ewes will also be offered. They are derived from the celebrated flocks of Elman, Grantham, and Webb, the first and most distinguished breeders of South Down sheep in England.

Terms of the sale, cash, or approved endorsed notes, payable at the Bank of Auburn at three months, with interest.

Auburn, July 1st, 1847. J. M. SHERWOOD.

PROUTY & MEARS' PLOWS.

THESE celebrated plows are warranted, and the money will be returned for every plow that does not suit. Hon. Dixon H. Lewis, Senator from Alabama, said, at the Farmer's Club in New-York, "My corn crop declined from 70 bushels per acre to 40; I sent north and got one of Prouty's plows, and now have the best crop within 50 miles."

The subscriber is sole agent, and offers for sale an assortment of the above plows, as also a general stock of agricultural Implements. SAMUEL C. HILLS, 189 Water-street, N. Y.

New-York, August 1, 1847—3t.

A VALUABLE FARM IS FOR SALE

IN Windsor, Vt., containing upwards of 400 acres of land, comprising tillage, grazing, and woodland in due proportion. It is situated on the banks of the Connecticut river, near the village of Windsor, and also near the eastern terminus of the Vermont Central railroad, and is well provided with suitable buildings, among which is a beautiful English cottage, recently built. The farm is in a fine state of cultivation, and in point of capacity for improvement, and convenience, and beauty of situation, is unsurpassed in its own beautiful valley. SAM'L H. PRICE, Agent.

Windsor, Vt., Aug. 1, 1847.—3t.

IDE'S PATENT WHEEL CULTIVATOR AND WIRE GRASS PLOW.

(*An engraving of this implement will be given next month.*)

THE farming public are hereby informed that letters patent have been taken out by the subscriber for his recent great improvements in the construction and manufacture of field CULTIVATORS; an improvement so great as to entirely revolutionize the whole system of farming by reducing the expense of cultivation one-half or more. Wherever they have been introduced they have met the decided approbation of farmers, as the following certificates and testimonials from the intelligent and practical farmers, whose names are attached, abundantly show.

CERTIFICATES.

"This may certify that we, the subscribers, have seen and used the Patent Wheel Cultivator, invented by Nathan Ide, of Shelby, Orleans Co., New-York, and believe it to be decidedly the best machine ever invented for pulverizing the ground and facilitating the labor of the farmer.

James H. Hedley,
Enos Newman,
Gardner Berry,
James P. Anderson.

Shelby, Orleans Co., April 23, 1845.

Charles L. Flint,
Asahel Wadsworth,
Henry Wadsworth,
H. N. Andrus.

Livingston County.

The undersigned have just witnessed the operation of Nathan Ide's Cultivator, and we are free to say that we regard it as a decided improvement on all the implements of the kind now in use for preparing land for wheat and other crops.

Daniel Lee, Ed. Gen. Farmer,
Rawson Harmon,
William Pixley,
Peter Sheffer, Jr.,
William Buell,
Alexander Williams,
Joseph Williams,
John M. Cutler.

Monroe Co., July 3, 1846.

After these ample testimonials the subscriber deems it unnecessary to enter into a long and elaborate description of the implement, with its various points and modes of operation.

The wheels are 32 inches in diameter—are capable of being raised or lowered at pleasure. The teeth are 14 inches long, with substantial braces behind each tooth.

The advantages of this Cultivator are manifold. 1. By means of the wheels the machine runs easy, and the teeth go to a uniform depth. 2. The teeth are so long that the machine never chokes. 3. The tongue guides the implement with accuracy and precision. And 4. At seed time, by going the last time across the lands, small channels or ducts are formed leading into the main furrows, which effectually take off the surplus moisture, and thus render the wheat less liable to be winter killed.

NATHAN IDE, Patentee.

Shelby, Orleans Co., N. Y., Aug. 1, 1847.—1t.

STUART'S PATENT SELF CLEANER THRESHING MACHINE.

WE challenge any other kind of self cleaner threshing machine in the United States, or any other country, to compete with the above machine, for simplicity and cheapness of construction, for easy and still running, fast business, cleaning grain well, saving hay seed, &c. The above machine weighs about 1,000 lbs., is easily placed on a common wagon, and works on the same, by merely blocking the hind wheels, either in the barn or field. Said machine is constructed so as to carry off the straw and chaff, either in the yard, to a stack-pen, or on a wagon, or may be carried over head in the same barn in which the machine is working. It may be elevated high or low at pleasure, with perfect ease. The elevator, not only carries off the straw and chaff, but prevents all head winds from interfering with the fanning mill, also obviates chaff and dirt from blowing back into the grain, which is not the case with other kinds. Read the subjoined certificates and be convinced.

RECOMMENDATIONS.

To all to whom this may concern.

We the undersigned, inhabitants of the towns of Veteran and Catharine, in the county of Chemung, and state of New-York, do hereby certify that we have used, and seen in use, Stuart's Patent Self Cleaner Threshing Machine, and would recommend it as being the best machine for threshing and cleaning grain we ever saw; and in consequence of the simplicity and cheapness of its construction, utility, durability, and ease and stillness in running, together with its illiability to get out of order, and the fastness of doing work, we would most cheerfully recommend the above machine to those who build, use, and employ, as being the best machine now before the public, with which we have become acquainted.

Ephraim Kembull,
E. M. Hewitt,
Jackson G. Brown,
Minor L. Sherwood,
William Goold,
Jeremiah Kendall,
George Patchin,
Nathan Brisco,
John T. Worden,
Alanson Bulkley,
Manly Palmer,
Isaac Brisco,
Lewis Hewitt,
Isaiah D. Lee,
D. Danihee,
John I. Benson,
Alonzo Banks,
Albert Brown,
Garry Stone,
Aris Haskin,
C. Banks,
Henry Bates,
P. Vangorder.

The subscriber is now prepared to travel through the United States, with a model and the patent, and all papers pertaining to the above business, for the purpose of of selling rights of counties, states, &c., anywhere in the United States, and on good contracts will build and put in operation full power machines for exhibition. Certificates of the above description can be obtained in great abundance, but the undersigned deems it unnecessary, as he will be found otherwise prepared to convince the public.

S. S. CURTIS, Sole Agent for the U. S.

Catharine, Chemung Co., N. Y., Aug. 1, 1847—1t*

PRINCE'S PREMIUM STRAWBERRIES.

WM. R. PRINCE & Co., Proprietors of the Nurseries at Flushing, will transmit their catalogue of strawberries and other fruits to those who do not possess it. The assortment is imcomparably superior to any other, and comprises the choicest varieties, which are no where else obtainable, many of which are offered for the first time. Orders enclosing the amount, (not less than $5,) will be promptly executed and forwarded as desired. August to October are best for planting strawberries.

Flushing, L. I., August, 1847—2t.

PURE BRED RAMS.

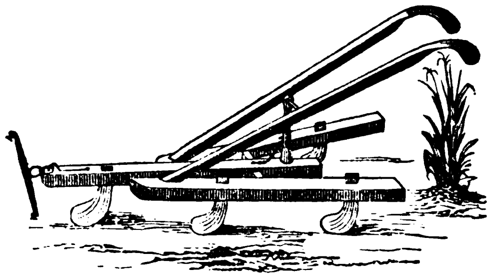
THE subscriber has a few choice rams for sale, bred from the celebrated flock of Geo. Flower Esq., of Albion, Illinois, and some from a Saxon ram imported by Henry Clay, Esq., of Ashland, Kentucky. These sheep are of fine healthy constitution, with a very fine long staple.

He has also added to his flock 20 ewes and rams, selected from the flock of Samuel Patterson, Esq , of Washington Co , Pa. These sheep are not surpassed by any in America; [see the communication of L. A. Morrell, Esq., Cultivator for Nov. 1846,] their wool having been sold last year in Northampton, Mass., at 75 cts.

He has also a few fine young Shepherds' Dogs, bred from a Scotch cully, imported by Mr. Mitchell, of Lasalle Co., Ill.

A. H. NICHOLS, Greencastle, Putnam Co., Ia.

August, 1, 1847—4t.



IMPORTANT TO FARMERS.

THE subscriber having obtained, by deed from the original patentee, the exclusive right to make and vend

ROGERS' PATENT IMPROVED STEEL SELF-SHARPENING CULTIVATOR TEETH,

In the counties named below, is now prepared at his residence in Vernon, to furnish to the farmers of Oneida, Madison, Oswego, Jefferson, Lewis, Chenango, St. Lawrence, Herkimer, Otsego, Broome, Delaware, Scoharie, Montgomery, Fulton, Hamilton, Saratoga, Schenectady, Albany, Columbia, Dutchess, Greene, Renselaer, Washington, Warren, Franklin, Clinton, and Essex, by wholesale and retail, ready made.

CULTIVATORS,

Of different sizes, to suit purchasers

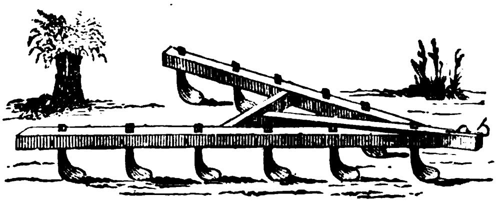
From the known superiority of this implement over all other Cultivators now in use, the subscriber pledges himself to furnish a cheaper and better article than has ever before been offered to the public. The teeth (at present,) will all be made by the patentee from the best of steel.

AGENTS.—Luther Tucker, Ag. Warehouse, Albany; Sanger & Benedict, No. 125 Genesee-st., Utica; Rome, Warren G. Brainard; Florence, Alanson S. Tiler; Trenton. Charles R. Billings; Bridgewater, Delos DeWolf. *Madison Co.:* Morrisville, H. D. Cloyes; Chittenango, Jenkins & Harrington. *Oswego Co.:* Oswego, J. L. Merriam; Mexico, Asa Bebee. *Jefferson Co.:* Watertown, T. Avery Smith. *Lewis Co :* Lowville, Solomon Phelps. *Chenango Co.:* Sherburne, N. Starr; Norwich, Weller and Haynes, Greene; George R. Lyon. *Herkimer Co.:* Mohawk, Gordon Farmer. *Otsego Co.:* Butternuts, R. H. Van Rensselaer. *Albany :* Erastus W. Clark; Isaac Tice Poughkeepsie; E. Gifford, Hudson; John Benedict, Saratoga Springs; John J. Yates, Schenectady; Abner Powell, St. Johnsville.

For further particulars, the subscriber refers to the following certificates, given by some of the most experienced practical and scientific agriculturists in this state. E. R DIX.

Vernon, Oneida Co., N. Y., Aug. 1, 1847.

We certify that we have used, or have now in use, one of the above Cultivators, and are fully satisfied with its operation, and believe it must supercede all others now in use; and that it accomplishes in the most thorough manner, much of the work usually done with the plow. From thorough and careful observation of the working of this implement, we are fully convinced that for cultivating fallow ground, in preparing any ground for a crop of grain, and for covering grain after sowing this instrument surpasses any other with which we are acquainted, in the thorough manner in which it does the work, and the ease and expedition of doing the same. By its use, the ground may be put in better order, and a heavier crop secured by once plowing, than by three after the ordinary manner. And we are satisfied that plowing once deep and well, and then using the cultivator, is most advantageous, especially on sward lands, (for they are seldom without a sod at time of plowing,) where June grass or other grasses are indigenous. By the time the sod has fairly commenced rotting, it is turned back and exposed to the action of the dews, rains, and hot sun, by which its fertilizing qualities are mostly dis-[illegible]nated; for that which does not renew its partially extinguished life and growth, (choking thereby the growth of the grain,) dries and is left on the ground, a detriment rather than a benefit to the crop. But if it remain where it is first deposited by the plow, it becomes decomposed in time to be available to the grain in its growth, and its beneficial effects will be as apparent as would be those of a good dressing of compost. The grain taking a deeper and stronger root in the turf, will not be as subject to drouth in dry, drowning in wet weather, or heaving in the spring, warming and fertilizing the soil; by which its germinating process will be very perceptible over the old method. We cheerfully recommend this Cultivator to the Farming public as a very great improvement in farming.



Ira S. Hitchcock, President of the Oneida Co. Ag. Society
J. Whipple Jenkins, " Vernon " "

N S. Wright,
Calvary Wetmore,
Philo Norton,
Jos. Case,
} V. Pres'ts.
L. T. Marshall, Sec'y,
S. A. Bunce, Treasurer.
John R. Jones,
Salmon Case,
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Amos Miller,
William Wright,
C. C. Cook, Kirkland,
T. E. Dorman, Hamilton,
Edward Rivenburg,
Nicols Dyer,
Elisha Pettibone,
J. C. Pettibone,
Philo Griswold,
Samuel Cody, Jr
Samuel H. Churen,
Frederick Ingersoll,
Albert Patten,
N. F. Metcalf,
Samuel Wright,
James Faulkner,
Oliver E. Bryant,
S. Frost,
Ozias Jacobs
Alanson Norton,
William Wright, Jr.,
Sands Sherwood,
Lyman Jacobs,
Jabez Norton,
Elijah Wilson,
George Rivenburgh,
Chas. G. Lawson,
M. H. Frisbee,
Asahel Bronson,
Lester Hitchcock,
Franklin Tilden,
Francis Cody,
Hiram Parsons,

Philander Jacobs,
John Dean, Deansville,
Benj. Barnes, Kirkland,
S. W. Gunn, "
Thos. A. Gruman, "
J. C. Hastings, "
David Pixley, "
Edwin Gruman, "
Sylvester Risley, Brookfield.
Augusta.
John Van Hoesen,
J. Bennet Mackey,
Sylvester Hinman,
Madison Wood,
Walter Powers,
Wm. M. Fairchild,
Franklin Cummins,
Eli Hinman,
John Porter,
S. W. Wells,
W. Jackson,
Z. T. Barber,
C. Stebbins,
A. Stebbins,
Wm. H. Stafford,
W. E. Conger, Sangersfield,
Simeon E. Cobb, Lenox.
Stockbridge.
Noah M. Coburn,
John Potter,
Fred. Snell,
A. Somers Dunham,
Timothy Smith,
Jacob Howse,
John H. Cleveland,
Rodney Wells,
Eli Moore,
Ira Burleson,
Danforth Armour,
Alex. Strong,
John Quackenbush.

We certify that we have used, the past year, one of the above cultivators, and from thorough and careful observation of the working of this instrument, we are fully convinced that for cultivating fallow ground, destroying weeds and Canada thistles, and most especially quack or blue grass, we recommend the cultivator as a very superior implement:

Wm. C. Powers,
D. L. Van Hoson,
Stephen Wells,
Abner Hinman,
Horace Fish,
John Butterfield, Utica,
Chas D. Palmer. Waterville,
Benj. Plant. New Hartford,
Daniel C. Mason, "

S. M. Mason, New Hartford,
Ephraim Palmer, "
James Wells, "
J. Rivenberg, Stockbridge,
Levi House, "
Alvin Strong, "
John Yale, "
Montgomery Page, "

The New-York State Fair at Auburn, last September, awarded me a Silver Medal, for its being the best agricultnral implement ever offered to the farmer. The American Institute, in the city of New-York, awarded me a Diploma for the same. 1st. These teeth are made of steel, of such size and dimensions as to be sufficiently strong for two horses; then they are struck into shape with dies, so as to form the shank out of the same piece. 2d These teeth wedge in the frame better than any square shank, because they are so shaped, (being thicker behind than forward, and hollow,) that the wedge crowds them forward and sideways at the same time. 3d. These teeth will wear sharp instead of dull, and when worn up too short, can be spread at the lower end, and dropped a little lower in the frame, and they will last another term of years

Caution is hereby given to all men against purchasing or using any teeth made according to the description above, without the patentee's name on them, as all violations of my right will be prosecuted promptly.

DAVID B. ROGERS.

SHORT-HORNS FOR SALE.

THE subscriber has on his farm a few spring calves, (bulls and heifers,) which he will dispose of when 3 to 4 months old, at $75 to $100 a piece.

These animals were all got by his premium bull Meteor, a descendant of his imported bull Duke of Wellington, and heifer Duchess, both of which latter animals he imported from the celebrated Short-Horn herd of Thomas Bates, Esq., Yorkshire, both possessing the blood of his Duchess tribe. The calves offered for sale, are from good milking Short-Horn cows, and having through the bulls Duke of Wellington and Meteor, some half, and others three-quarters of the blood of the Bates bulls, they will be valuable to such as wish to improve their herds. GEO. VAIL.

Troy, June 16, 1847.—2t.

KINDERHOOK WOOL DEPOT.

THIS enterpize has been in successful operation for the past two years, and has fully met the expectations of the wool-growers, who have been its patrons and projectors. It will be continued the present year, conducted as heretofore. The subscriber will be prepared to receive wool as soon after shearing as may be convenient for the growers to deliver it. The fleeces will be thrown into sorts according to *quality* and *condition*. Those who desire it can have their clip kept separate, and sold when ordered. A discrimination will be made between wool in good or bad condition. Sales will be made for cash, and the owners can rely on prompt returns. The charges for receiving, storing, sorting, and selling, will be one cent per lb. and insurance. Liberal advances in cash made on the usual terms. Sacks will be forwarded to those who wish, by their paying the transportation and 12½ cents each for their use, or if furnished by the owner of the wool, will be returned, or sold at their value, as he may direct.

Reference can be had to Dr. J. P. Beekman, Kinderhook, D. S. Curtis, Canaan, C. W. Hull, New Lebanon, Col. Co., J. B. Nott, Esq, Albany, D. Rogers, Hoosick, Rens. Co, C. H. Richmond, Esq., Aurora, Cayuga Co., Col. J. Murdock, Wheatland, Monroe Co., N Y. H. BLANCHARD.

Kinderhook, June 1, 1847—3t.

JOHN MAYHER & CO.

U. STATES AGRICULTURAL WAREHOUSE,

No. 195 Front-street, (near Fulton,) New-York.

Foundry and Machine Shop 502 *and* 504 *Water-st.*

THE subscribers respectfully invite the attention of Merchants and Dealers in AGRICULTURAL IMPLEMENTS to the superior assortment of goods which they manufacture, embracing Plows and Castings of the most approved kinds in use, and possessing all the latest improvements in style, workmanship, and material, among which are the following articles, that can be seen at their warehouse:

Pitts' Corn and Cob Crusher, Price, $40
Sinclair's do.—hand or horse. $30
Fitzgerald's Patent Burr Stone Corn Mill, $60
Sinclair's Cast Plate Corn Mill, $40
Swift's Corn, Coffee, and Drug Mill, $6 to $8
Hovey's far-famed Hay, Straw, and Stalk Cutter;
Sinclair's Hay, Straw, and Stalk Cutter;
Greene's do. do. do.
Mayher & Co.'s do. do.
Langdon's do. do. do.
I. T. Grant & Co.'s Premium Fanning Mill;
J. Mayher & Co.'s do. do.
Boston Centre Draught Premium Plows,
Bergen's Self-Sharpening Plows;
Dutcher's Plows of all kinds;
Hitchcock's do. do.
Freeborn's do. do.
Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price, $55
do. do. 4 do. $75
do. do. 2 Thresher, $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
Warren's do. do.
Sinclair's Corn Sheller and Husker;
Pitt's Horse Power and Threshing Machine;
E. Whitman's Jr., Thresher and Separator;
Subsoil Plows of different kinds.

Cultivators, Wheelbarrows, Canal Barrows, Store Trucks, Horse and Ox Carts, Mule Wagons, Ox-Yokes and Bows, Hames, Trace and Ox Chains, Road Scrapers, Ground Augurs, Shovels, Spades, Pick Axes, Hay and Manure Forks, Rakes, Hoes, Scythes, Scythe Snathes, Grain Cradles, Crow Bars, &c., &c., all of which will be sold as cheap as they can be bought at any other store in the city, and are warranted.

Gin Gear, Segments, Rag Wheels, &c.
Castings of all kinds made to order. March 1, 1847—tf.

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks, and ewes—of undoubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk. R. J. JONES.

Cornwall, Vt., June 1, 1847.—tf.

FOR SALE.

A FEW very superior Paular Merino sheep—very heavy shearers, and of fine quality; 25 yearling bucks, large and likely, of long staple, and very thick wool. Also, from 50 to 75 ewes, from one to four years old, that are nice, and cannot be matched in the state. For further particulars, inquire of the subscriber a Newport, R. Island. JOSEPH I. BAILEY.

July 1—3t.

DRAINING TILE,

MADE, and for sale by JAMES CHAPMAN.
Enfield, Ct., July 1, 1847.—3t.

ONE OF THE GREATEST INVENTIONS OF THE AGE.

KEPHART'S PATENT FRUIT AND VEGETABLE PRESERVER—by the use of which Fruits, Vegetables, Butter, Eggs, Bacon, &c., can be had at all seasons of the year—possessing all their natural juices and flavor.

The undersigned, having purchased the above patent right for the United States and Territories, excepting the states of New-Jersey, Delaware, Maryland, and the cities of New-York and St. Louis, invite the attention of the public to an examniation of the scientific principles upon which the above invention is based, as well as its practical utility. For a particular description of the Preserver, see the Cultivator for July, 1847, page 217. They offer for sale patent rights for the construction and use of the Preserver, by states, cities, counties, towns, or individual rights, upon terms that will induce all interested in the growth or sale of fruit and vegetables; also dealers in butter, eggs, or in the curing and preservation of meats, to purchase rights and construct houses.

All desirous of a farther knowledge of the operations of the preserver, can see one in operation, either by calling upon P. Kephart, Western Hotel, Baltimore, Md., who is our authorized agent, or upon the subscribers, Coats-st. Wharf, near Fairmount, Phila.

All communications will receive prompt attention if addressed either to P. Kephart, Baltimore Md., or FLACK, THOMPSON & BROTHER, Spring Garden P. O., Philadelphia, Pa.

July 1—tf.

WILCOX'S IMPROVED GRAIN CRADLES.

One of the best, lightest, and cheapest in use—with warranted scythe, complete, at $3.35.

Also, I. T. Grant's Celebrated Premium Cradles, constantly on hand, and for sale at the Albany Agricultural Warehouse. L. TUCKER.

July 1.

I. T. GRANT & CO'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hope to be enabled hereafter to supply promptly the rapidly increasing demand for that article. These mills have been repeatedly tried, and the principle upon which they operate thoroughly examined and tested by committees appointed by the State Agricultural Society, and in every instance have been declared greatly superior to any that have come in competition with them. They have taken the *first premium* at four of the New-York State Agricultural Fairs, (being all at which they have been exhibited,) and at the State Fairs in Pennsylvania and Maryland. Our mills took the first premium, at the Fair of the American Institute in 1846, and they received the highest consideration at the great National Fair, recently held at the city of Washington. Wherever they have been exhibited, they have received the unqualified commendation of agriculturists, and are believed to be the only mills ever invented or manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle and *smut* at the same time. They will also thoroughly clean all other kinds of grains and seeds by running it through once. We manufacture four sizes, varying in price from $21 for No. 1, to $27 for No. 4, and have no hesitation in warranting them superior to any thing of the kind now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premium wherever exhibited.

Our Fan Mills and Cradles are for sale at factory prices at the following places:

John Mayher & Co., 195 Front-st., New-York.
E. Whitman, 55 Light-st., Baltimore.
Denslow & Webster, Savannah, Georgia.
Fitzhugh Coyle, Washington City.
Baggs & Parsons, Springfield, Mass.
Pierce, Sweet & Co., Burlington, Vt.
J. W. Howes, Montpelier, Vt.
Luther Tucker, 10 & 12 Green-st., Albany, N.Y
H. Warren, Troy.
J. S. & J. Brown, Newburgh.

Orders thankfully received and promptly attended to, and all goods delivered at Troy, N. Y., free of charge.

I. T. GRANT & Co
Junction P. O., Renss. Co., N. Y., July 1—tf.

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MERINO SHEEP FOR SALE.

THE flock of sheep raised on the Oaklands farm, has increased beyond the limits proportioned to the number of acres. The subscriber therefore offers to sell 150 ewes and wethers. They are well worth the attention of farmers desirous to increase or improve their flocks. A few yearling bucks may be had also. The flock may be seen on the farm in Fayette, Seneca Co., near the outlet of Seneca lake. All letters addressed to the subscriber, at the Geneva post-office, post paid, shall have attention. J. DELAFIELD.

August 1, 1847.—1t.*

MONTGOLFIER'S HYDRAULIC RAM.

A SIMPLE and effective machine for forcing a portion of any brook or spring over any required distance and elevation, where a proportionate fall can be obtained.

It is used for supplying farm-houses, factories, villages, railroad stations, &c., with running water.

The simplicity of the operations of this machine, proves at once its effectiveness; as also the simplicity of the Machine itself shows its durability as well as the very small amount of attention and repairs it will require.

The subscribers are prepared to make and put up *Rams* of all sizes and kinds, (which they will warrant in every respect,) with the accompanying pipe, reservoirs, baths, water-closets, fountains, &c., &c., when required.

Persons wishing Rams sent to them, by measuring the amount of water their brook or spring affords per minute, the head or fall they can procure, the elevation to be overcome, and distance to be conveyed, can have the proper Ram and pipe sent them, with directions for putting it up. If the supply be unlimited, the amount of water required should be stated.

☞ The expense of a ram and necessary pipe is so small as to be within the reach of every one; in most cases being less than that of a well and pump. Manufactured and sold by

FARNHAM & BROWN, No. 191½ Market-St, Philad'a.

N. B. They have removed from Ninth and Green-Streets, to 191½ Market-street, at the Agricultural Warehouse of D. O. Prouty, a few doors below Sixth, lower side, where orders can be left. One of the Rams is to be seen in the yard in daily operation.

Price of 1¼ inch Rams, $12; 1½, 15; 1½, with large air chamber, $20.

August 1, 1847.

ALBANY AG. WAREHOUSE AND SEED STORE.

A DESCRIPTIVE CATALOGUE of the numerous list of Agricultural Machines, Implements, Tools, Seeds, &c., for sale at the Albany Ag. Warehouse and Seed Store, illustrated with about fifty engravings, will soon be ready for distribution. It may be had gratis on application at the store, No. 10 Green st., or on application by mail, post-paid. LUTHER TUCKER.

☞ For all kinds of implements required by the farmer or gardener, such as Horse Powers, Threshing Machines, Fan Mills, Corn Mills, Corn and Cob Crushers, Hay and Straw Cutters, Plows of all kinds, Horse Rakes, Cradles, Churns, Cheese Presses, Cultivators, Harrows, Shovels, Hoes, Forks, Scythes, &c., &c., apply at the above establishment.

August 1, 1847.

SEED WHEAT.

THE celebrated White Flint, Hutchinson, Red-Chaff, and Blue Stem wheat for sale The above are winter varieties, and are considered the best now grown in New-York.

Seed rye, also, and Buckwheat, together with a general assortment of field seeds of various kinds, on hand.

A. B. ALLEN & Co., 187 Water-st., N. Y.

August 1—2t.

GRASS SEEDS.

TIMOTHY, Red-top, Rye-grass, and Blue Grass, Furze Top, Red and White Clover Seed, of the best quality, for sale by

A. B. ALLEN & Co., 187 Water-st., N. Y.

August 1, 1847.—2t.

BURR'S OHIO SEEDLING STRAWBERRIES.

THE following choice varieties of new Seedling Strawberries are now offered for sale, and confidently recommended to the public as superior to any heretofore cultivated.

1. *Ohio Mammoth.*—Fruit very large, the most uniformly large strawberry known; rather long or conical, pale red or flesh color; flavor sweet and excellent; foliage large, plants very hardy, vigorous and productive; flowers perfect or staminate.

2. *Burr's New Pine.*—Berries large, light or pale red, and possess a very high aromatic, sweet, and delicious flavor; very early; plants perfectly hardy, vigorous, and uncommonly productive—pistillate—unquestionably the very best strawberry cultivated.

3. *Rival Hudson.*—Fruit dark and shining red, resembling the Hudson or Cincinnati, except the stem and fruit are both longer; flavor high rich, and excellent; plants perfectly hardy, a profuse bearer—pistillate.

4. *Columbus*—A beautiful large dark colored fruit, nearly round, possessing a rich and sweet flavor, plants very hardy, and uncommonly prolific—pistillate.

5. *Scarlet Melting.*—A handsome dark colored fruit, rather long, with a neck. Possessing a rich and pleasant flavor, flesh very tender: the plants are hardy—grow rapidly, and bear very abundantly—pistillate.

6. *Burr's Old Seedling.*—Undoubtedly the best known for impregnating other varieties. Flowers staminate, blooming early and continuing late, and always producing [here] a large crop of large, handsome, and most delicious fruit.

Several additional varieties will be found described in a report on this subject, by a committee of the Columbus Horticultural Society, published in the papers; plants of which can be furnished to a limited number.

Prices of Plants.—Nos. 1 and 2, $2.50 per dozen; nos. 3, 4, and 5, $1 per dozen; No. 6, 50 cts. per dozen—$2 per 100.

Plants of Hovey's Seedling, Hudson, [of Cincinnati,] and several other old standard sorts, can be supplied if desired, at same price as No. 6.

Boxes of plants can be sent with speed and safety by express or stages in almost every direction from Columbus. No charge will be made for boxes or packing when $5 worth or more plants are ordered. JOHN BURR.

Columbus, O., Aug. 1, 1847.—1t.

THE CULTIVATOR

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, SEPTEMBER, 1847. No. 9.

SKETCHES OF FARMING IN WESTERN NEW-YORK.*

Mr. **JOHN JOHNSTON'S** farm partly adjoins Mr. **DELAFIELD'S**. Considering the disadvantages under which Mr. J. commenced operations here, his success has been quite remarkable. He came from Scotland twenty-six years ago, and first purchased 120 acres of the farm on which he now lives. The land was so worn down by bad management that he was laughed at for buying it, and even the man of whom he bought, frankly told him it would "bear nothing." Not in the least discouraged, however, Mr. J. began, *fully determined*, as he says, that he would make himself *independent*. His first crops, as was expected, were light; but they gradually increased, till by the fourth year they were so heavy as to attract the particular attention of his neighbors, who had prophesied so unfavorably. In the course of a few years, he began to realize the fruits of his labors, and seeing the prospect opening brightly, he sent to Scotland for his family. His farming continued to be more and more profitable. Having paid for the first lot of land, he bought more, and continued to make additional purchases till he has now 306 acres in his home farm, and a farm of 200 acres in Yates county,—all paid for and in a good state of improvement. Mr. J. therefore, now finds himself in the comfortable state of "independence," for which he started, twenty-six years ago, with such a firm determination of reaching. It is an important fact, too, as well as agreeable reflection, that he has reached this position unaided by speculation, having had no resource of consequence but his hands and his farm.

Mr. **JOHNSTON'S** principal products have been wheat and wool. His soil is naturally good, but has been greatly improved by sheep, which, with the adjuncts of deep and thorough tillage, have been the chief instruments in producing larger crops of wheat, on the average, than have been obtained from any other farm within our knowledge. He usually has from fifty to eighty acres of wheat in a season. His last three crops, (for 1844, '45, and '46,) averaged thirty and a third bushels per acre. The crop of the present year appeared well, for the most part, though like crops in general, it was somewhat injured by the winter on that portion of the farm which has not been drained.

The soil of this location, belongs, geologically, to the Hamilton shales. Its composition appears to be of the best character for the production of wheat. Its excellence is not, like most soils, confined chiefly to the surface, but the earth to the depth of several feet, or in some instances to the underlaying rocks, is equally fertile, after due exposure to the air. In several instances, we noticed on Mr. **JOHNSTON'S** and Mr. **DELAFIELD'S** farms, that where ditches and drains had been dug, and the earth which had been taken out was spread over the surface, the wheat, barley, and oats were heavier than in other parts of the field. In a field of barley, a ditch had been dug and the earth left unspread on its banks. The crop was decidedly more luxuriant on the bank of this ditch than in any other place.

EFFECTS OF LIME AND ASHES.—Mr. **JOHNSTON** has frequently tried wood ashes on his land, but could never perceive any effect from them. He has also made frequent use of lime, and with marked advantage. He showed us three ridges or lands in wheat, the two outside ones of which were limed, and the centre was not limed. The superior stoutness of the crop on the limed lands was obvious. Is there any theory which will account for the beneficial action of lime and the failure of ashes in this case? The soil evidently abounds in lime—it rests on limestone, and loose limestones are mixed more or less through its surface. The earth taken at various depths, from a few inches to two and a half feet, effervesces strongly in acids, showing that lime is one of its prominent ingredients; and yet on this very soil burnt lime produces extraordinary effects. This is not a solitary instance of the operation of lime in similar circumstances; we have known several such, and Mr. **COLMAN** informs us that in Europe the best action of lime is frequently on limestone soils.

Mr. J. prefers applying his barn-yard manures in the spring, to sward ground, which is either to be planted to corn or used as fallow. The manure is spread and plowed in. As it is of a coarse nature, and in an unfermented state, and applied in pretty heavy dressings, it is difficult to dispose of it without covering it with the plow. He has nineteen acres of Indian corn, planted on sod, (with **EMERY'S** seed planter,) which we thought as promising in appearance as any we had seen this season. His fallows are worked very thoroughly. He takes special care that no weeds or grass shall grow on them, frequently going over the fields with harrows or cultivators. They are always plowed twice, and sometimes more, and at the latter plowings the soil is cut into fine furrows, not less than seven and sometimes nine inches deep. This frequent working is undoubtedly of great advantage to this stiff soil.

His sheep have formerly been from 1,000 to 1,200 in number. Lately, however, he has substituted cattle for sheep to a considerable extent. He has at present sixty head of cattle, forty of which are three years old steers, bought last fall and fed through the winter in the barn yard on straw, oil-cake, and corn-and-cob meal. They are to be turned off for beef whenever the market is most favorable. Mr. J. thinks the feeding of cattle in this way has some advantages over keeping sheep. He can buy the steers in the fall and generally sell them in the spring, during which time they will have consumed a large portion of his straw, and with the other food that will have been given them, will be fat. The summering of the stock is thus avoided, and Mr. J. thinks he will have more manure, which is a great object with him, than he could make by devoting his farm as much as he formerly did to sheep.

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* Continued from page 254.

Superior Cow.—Among Mr. J.'s cows, several of which were full blood Short Horns, we particularly noticed a half-blood cow, five years old, which had produced her second calf about five weeks before. Seeing that she was really a fine animal, and had the appearance of an uncommon milker, we made inquiries in regard to her. Mr. J. told us that she had been regularly milked three times a day, since she calved. When the calf was about two weeks old, the milk of the cow was carefully measured for several days, and found to range from thirty-six to forty-two wine quarts per day. She is a well-formed and thrifty cow, and notwithstanding the very great quantity of milk she afforded, was in good flesh.

Under-Draining.—Mr. Johnston is of opinion that the winter-killing of wheat is caused by too great a retention of water in the soil and subsoil. In this we fully agree with him. To obviate the evil he has resorted to under-draining with tiles, of which he has laid 700 rods. The tiles are made by Mr. Whartenby, of Waterloo, after a pattern procured by Mr. J., from Scotland. They cost at the kiln twenty cents per rod. The drains are dug about two and a half feet deep, or so low that the water does not come up through the bottom. The digging costs from eight to ten cents per rod, making the whole cost of the drains, including the carriage from the kiln, about thirty cents per rod. The tiles appear to be made in the best manner. They are not in the least injured by the weather, even when exposed to the most severe frost. Where the bottom of the ditch is firm, the tiles are placed immediately on it; if the ground is soft, a hemlock board is laid down, on which the tiles are placed. A little straw is laid over the tiles and the earth which had been excavated is then thrown on.

The beneficial effects of draining on Mr. Johnston's farm are very apparent. Places which formerly would bear no wheat, nor indeed scarcely anything but a kind of sour grass and reeds, are made, merely by draining, to produce the finest crops of every description of grain. He is so well convinced of the advantages of the practice, that he has laid 400 rods the present season, and intends to continue it still more extensively.

Mr. J. is now beginning to turn his attention, more than he has formerly been able to do, to the improvement of his buildings and fences. Along the roads, he is removing the rail fences, and substituting for them neat and substantial board ones; and he is preparing to remodel and repair his barns.

Having examined Mr. Johnston's farm, he carried us up the lake a few miles. We called at the fine farm of Mr. Herman E. Foster, who came here from the city of New-York, four years since. Mr. F. was absent, and we therefore took only a cursory view of the premises. The land is of good quality, and the whole farm appears to be managed with much neatness. The location is very pleasant, commanding an extensive view of Seneca lake, and embracing altogether one of the most beautiful landscapes we met with in our excursion.

We are indebted to Mr. Johnston, also, for conveyance to Geneva, and to several farms in Ontario Co.

At Geneva we called for a short time at the implement manufactory of Mr. T. D. Burrall. Mr B. is one of our most worthy and intelligent mechanics, and has been long engaged in making various kinds of agricultural implements. His plows, cultivators, harrows, &c., are widely known, and much liked. He has lately been enlarging his works by several new buildings. The business is hereafter to be conducted chiefly by his son, Mr. E. J. Burrall.

The village of Geneva is very pleasantly situated at the foot of Seneca lake. Three steamboats ply regularly between this place and the terminus of the Chemung canal at the head of the lake. In the vicinity of the village are many fine residences, among which we particularly noticed the beautiful mansion and extensive grounds of the late Hon. Gideon Lee.

Mr. George Fordon, three miles from Geneva, has taken great interest in the improvement of horses and cattle. He owned for several years the Cleveland Bay horse Alfred, imported by Mr. Weddle, and which Mr. F. sold last spring, to go to Toronto, Canada. Mr. F. also bought of Mr. Weddle an imported mare of a breed used in England for coaches. From this mare he has bred several fine foals by Alfred. Of these he has a four-year-old stallion called Perfection, for which he received a premium from the State Ag. Society last season. He is a well-made and firm looking animal, well calculated, we should think, to beget a useful stock. He has another stallion called Young Alfred, by Alfred, out of a Kentucky mare. He is a heavy, strong animal, but does not show as good points generally, especially about the head, as Perfection. He has also several fillies and young mares of good promise—particularly one from the imported mare before mentioned. Of the progeny of Alfred, we have seen but few specimens. Mr. Johnston has reared several, some of which we saw, and were assured by him—as we have been by others, and as their own appearance also indicates—that they are excellent farm horses. They have weight and strength to carry the plow in a stiff soil, or to move a large load.

Mr. Fordon has formerly bred Short-Horn cattle, and he has still a few fine animals of this stock, though he has disposed of the most of his herd.

From this neighborhood we passed over to Col. Cost's, at Oaks' Corners. Much of the soil in this vicinity is quite sandy, forming, in respect to its texture, quite a contrast with that of the farms we have described on the east side of Seneca lake. We are informed that this sandy soil was, till within a few years, considered of inferior value, comparatively. Lately, however, its capacities have been better ascertained. Excepting for wheat, (and of this very good crops are frequently raised,) it is now considered equal to any land in this region; and in the opinion of many, its average returns, on the score of profit, actually exceed those of the stiffer soils. It is easily worked, at little expense; it can be worked at all times excepting when frozen, and crops on it are more independent of the weather than on more compact soils—neither suffering from wet or drouth. The crops in general looked well, and were more forward than we commonly met with—Indian corn and potatoes especially so.

Col. Cost is not now farming as extensively as formerly, and as his principal operations are with a farm situated at some distance from his dwelling, we had not time to examine them.

Considerable quantities of peppermint are raised in this vicinity, which is distilled for the purpose of procuring the essential oil. We expect from Col. C some statistics in regard to the business, which we shall publish.

Spread of Couch Grass—*Triticum repens*.—The idea is entertained that this grass, so pernicious in cultivated lands, is indigenous to this country, or that it springs up spontaneously; but there can be no reasonable doubt that the seed was first introduced here from Europe. Col. **Cost** related to us the history of its appearance in this neighborhood, which is worth remembering. Several years ago there was a noted race-course at Oaks' Corners, and horses were brought here to run from different parts of the country. On one occasion some horses came there from the Mohawk valley, where the couch grass had been common for a long time; and as was customary, the owners of the horses took along their own hay, on which the horses were fed, in temporary booths erected for them near the course. The next season, the couch grass made its appearance near where these horses had been fed; but by a well-timed and determined attack, the enemy was exterminated before an extensive possession had been obtained.

Col. **Sherwood's** farm, at Auburn, has been described in a previous volume of the Cultivator, (vol. II, new series, p. 250.) It consists of 300 acres. From the state in which it came into Col. S.'s possession, he has been obliged to begin at the foundation, and proceed in most respects as if it were a new farm. He has not yet had time enough to bring everything into the most desirable state, though he has made many important improvements, especially in buildings and fences. His farm is laid out in a very convenient manner, and can be managed with as much facility as any farm within our knowledge. He has devoted much attention to the improvement of live stock, and his herd of Short Horn cattle, and flocks of Merino and South Down sheep, are distinguished as among the best in the country. We have spoken more particularly of them, (as our readers have seen,) in another place. Of swine, he has Berkshires and Suffolks. A boar and sow of the latter stock, procured from **Wm. Stickney**, Esq., of Boston, are excellent hogs.

Col. **Sherwood's** crops this season, are forty acres of wheat, most of which we thought very good; four and a half acres of Multicole rye, which looked fair for a very heavy crop; fifteen acres of barley; twenty-two acres of Indian corn; four and a half acres of oats; four and a half acres of peas; and about three acres in various kinds of vegetables.

His land, like much of that in western New-York, (some of which we have described,) is much benefitted by deep tillage. He has this season broken up thirty acres of sward to the depth of nine to ten inches. His teams for doing this have been a pair of heavy oxen and a pair of heavy horses to each plow. This land, after having been thoroughly worked several times with a steel-tooth cultivator, is to be sown to wheat in autumn.

Judge **Richardson** and his sons, have several fine farms near Auburn. They keep large flocks of fine-wooled sheep. The flock belonging to the old homestead, consists of about a thousand, a portion of which we saw while they were being shorn. Their wool is generally of fine quality; the average weight of fleeces we did not learn.

Mr. **Ira Hopkins**, Auburn, has long been much interested in the improvement of agriculture and horticulture. He has now, however, given up the business principally to his sons. We regret that our engagements did not permit our calling on them. Mr. **Hopkins** showed us an excellent cow, for which he received the first premium as the best native cow, at the State Ag. Society's show at Auburn.

In company with Col. **Sherwood**, we called at the summer residence of **E. T. Throop Martin**, Esq., near Owasco lake. Few places which it has been our fortune to visit are more delightfully situated than this. From the dwelling, the grounds, diversified by green lawns and shady groves, descend pleasantly to the shores of the "fair Owasco." The grounds have been laid out with much taste, and are kept with scrupulous care. We noticed around a plat which has lately been laid out for a garden, some young hawthorn hedges, which for strength and healthiness are not surpassed.

Mrs. **Martin** is a most devoted florist, and has a fine collection of rare plants and shrubs, managed under her special direction with admirable taste and perfect neatness. Our stay here was necessarily short —scarcely long enough to admit of our seeing all the interesting objects belonging to this delightful rural retreat.

From the vicinity of Auburn, we passed over to Skaneateles. Our first call here was on **Wm. Fuller**, Esq., a gentleman who has been warmly engaged in agriculture for some time, though it is but two years since he moved on his farm. It consists of 140 acres of land, lying mostly on the easterly side of a hill, overlooking the village of Skaneateles, and the beautiful lake on which it is situated.

A great portion of Mr. F.'s farm was naturally very wet, and produced, a few years ago, only rushes and coarse grass. He has laid upwards of two thousand rods of drains, and much of the land which was comparatively of no value, has been brought under the plow, and produces bountiful crops of grain and vegetables. Nowhere have we seen finer and cleaner meadows than on some of these drained lands. The drains are filled with small stones, of which there were so many on the farm that it was necessary to remove them.

Mr. **Fuller** and some others in this vicinity, practice a mode of cultivation for wheat, somewhat different from that generally pursued in the country. Instead of a naked fallow, a *green* fallow is adopted. The land is broken up in the fall or in spring, and in May is put to peas or beans, which come off in ample time for sowing wheat in autumn. The peas and beans usually give from twenty to thirty bushels per acre, and they leave the ground clean and in excellent order for wheat. Manure is not applied in large quantities to peas and beans, as it tends to make them grow too much to vines. Mr. F. piles the manure in large heaps on the field, and after the peas and beans have been taken off, the ground is plowed and the manure spread and worked in with the cultivator. The manure, by his management, becomes so much decomposed by the time it is used, that it does not, it is thought, cause the grain to blight.

Mr. **Fuller** has some excellent Short-Horn cattle Several years ago he engaged in breeding this kind of stock somewhat extensively. His bull President, whose portrait was given in the seventh volume of the Cultivator, page 108, is admitted to have been one of the best bulls ever in this section, or in the state. He has several very fine dairy cows, both full and part bloods, some of the best of which were got by President.

We cannot omit a passing notice of Mr. **Fuller's** house. It was on the place when it came into his hands, but was out of repair, besides being inconvenient in its construction. He has thoroughly re-constructed, and fitted it up in such a manner that it presents a tasteful exterior, and is, altogether, a neat and convenient dwelling—the whole cost of the repairs being only one thousand dollars. We mention this as an example within the reach of nearly all our farmers.

There are several fine farms in the vicinity, but want of time prevented our visiting many of them.

We called with Mr. **Fuller** at the farm of Mr.

George Shotwell, comprising about 200 acres. He was not at home, and our stay was but short. He came from New Bedford, and took possession of the farm, as we are informed, four years ago. All the buildings on the place have been thoroughly repaired, and several of them erected since Mr. S. came here. They are of the best and most thoroughly finished kind—are planned and arranged in a convenient manner—and the premises, generally, presented indications of system and neatness, and at the same time of a judicious economy, scarcely exceeded by any farm we have visited.

At Mottville we called at the implement manufactory of Mr. Howard Delano. Mr. D.'s plows are widely known and highly approved. A pattern called the "Diamond plow," has received several premiums from the State Agricultural Society. He has lately got up two other plows, neither of which have we seen used. One of them is intended as a stubble plow, or for plowing land on which there is no sward. From its shape we should think it well calculated for this purpose—the curve of the mould-board being such as to thoroughly pulverize the ground, and leave it in fine condition for crops. The other plow is designed especially for very deep plowing. It is a strong and well-made implement, and persons who have used it assure us that its operation is completely satisfactory. We hope Mr. D. will exhibit both these plows at Saratoga.

From Skaneateles Mr. Fuller conveyed us to Geo. Geddes', Esq., Fairmount, about five miles from Syracuse. On our way we called at the residence of Mr. Squire M. Brown, Elbridge. Not finding Mr. B. at home, we did not see his farm. which is situated about two miles distant, and for which he received last year the first premium of the Onondaga County Agricultural Society, as the best cultivated farm in the county. Mr. Caleb Brown, (brother of Mr. S. M. B.,) has a good farm near Elbridge. He, also, was absent, though we afterwards met him. The buildings are neat, snug, and in good order, and appearances indicated that he is a good farmer.

Mr. Geddes' farm received last year the first premium of the State Agricultural Society, as the best cultivated farm in the state. The report in reference to it was published in the July number of the Cultivator for last year. The home farm consists of 300 acres, and he has a separate farm of 100 acres. The soil is a deep friable loam, formed mostly by the disintegration of the shales belonging to the Onondaga salt group. It is naturally very productive, and probably contains the elements of vegetable support in as great a degree and to as great a depth as any soil in the country. It seems to require at present very little manure—deep tillage being about all that is needed for the production of any crop.

Mr. G.'s crops for the present season are forty-two acres of Indian corn, twenty-two acres of wheat, twenty-five of barley, eighty of oats, three and a half of potatoes, twenty-eight in meadow. All these crops looked very promising, with the exception of the barley, which was sown very late, and had not sufficiently advanced to show what it might do. All had been well cared for, and were free from weeds.

A great obstacle to the successful cultivation of wheat on Mr. Geddes' farm, and in that vicinity, for a few years past, has been the wheat midge, (*Cecidomyia tritici*,) or weevil, as it is sometimes, (though improperly) called. This insect was so numerous and committed such ravages last season, that many fields in this neighborhood were not worth cutting. Many farmers did not obtain as much wheat from their land as they sowed. The Hessian fly, too, (*Cecidomyia destructor*,) was very abundant and destructive. The Mediterranean wheat, which is in a great degree exempt from the attacks of the Hessian fly, and which, from being about ten days earlier than the common kinds of winter wheat, it was hoped might escape the attack of the wheat midge, has been introduced, and bids fair to succeed well. Mr. Geddes had several acres of this kind which looked well, and had entirely escaped the insects. It is proper, however, to remark, that the midge has only appeared through this region in small numbers this season, compared with the last.

Mr. Geddes' fences are at present mostly of posts and boards; but, fortunately, he has a quarry on one corner of his farm from which "any quantity" of limestone, suitable for making walls, can be had. He has already made over 500 rods of substantial fence of this kind, and he intends to increase it at the rate of fifty rods a year. It is about five feet high, and costs $1.50 per rod. It is a perfect and perpetual fence.

Among Mr. G.'s stock, we noticed several good Short Horn cows, and also some good cows of mixed blood. He is going considerably into the business of breeding horses, and has some good mares. But of the horse kind, the most to our liking, was a handsome bay gelding, fifteen years old, whose limbs are as smooth and clean as those of a deer, and who can yet travel at a rate which the best of "the young ones" are "bothered" to equal.

The general appearance of Mr. Geddes' farm is highly creditable to his management. He has, to be sure, been favored with a soil of uncommon natural fertility; but the order and system with which the various operations have been conducted, indicate the skill and direction of a master. We would refer to the report before mentioned for a detailed account of the farm.

Mr. Geddes conducted us to some of the farms in the vicinity. We first called at the farm of Enoch Marks, Esq. He was not at home, but his son showed us a portion of the farm. It consists of 177 acres. The soil belongs mostly to the same formation as that of Mr. Geddes. Mr. Marks has the reputation of being one of the best farmers in this section, and all that we saw would lead us to the conclusion that this reputation is not undeserved. The farm is well laid out—the crops were clean and flourishing, no pernicious plants being suffered to grow. Even in the pastures, lanes, and by the sides of the fences, we noticed that the docks, thistles, and weeds had been pulled up or dug out. Mr. M.'s crops this season, are forty-eight acres of barley, twenty-one of wheat, forty-five of Indian corn, and eleven of oats.

Mr. Marks purchased in New Hampshire last fall, two mares of the Morgan stock, with their foals. The foals were by Mr. Wier's horse Gifford Morgan, and one of the mares has a foal this season by the same horse. They are good samples of the stock—showing the leading points of the Morgans very prominently.

Mr. James M. Ellis, Onondaga Hill, has a farm of 250 acres, situated on an eastern declivity, commanding a fine view of the Onondaga valley and the surrounding highlands, to a great distance. Mr. Ellis is evidently a judicious farmer. His buildings are in good order and neat in appearance. His fences, his crops, implements, stock, and every department of the farm, betoken the watchfulness and oversight of a careful husbandman. He keeps 500 fine-wooled sheep. The flock was originally a mixture of Merino and Saxon blood, but the rams to which the flock have been bred for several years, have been Saxons. Their wool is fine and of very superior quality. We saw the fleeces of the present season. They were most thoroughly cleaned, and were neatly put up—forming one of the best lots of wool we have ever seen.

RURAL NOTICES ABROAD—No. VII.—By Caius.

French Farming—Appearance of the Fields, &c.—The general surface of France has by no means that richness of rural aspect which every traveller remarks in England. This is owing, in some measure, to the more monotonous surface of the country; for while England is broken up into vast variety, by plain, valley, wood, height, glen, and gently undulating land, France, for the most part, presents a succession of vast waving plains, here and there channelled by slow running rivers, or traversed by lines of mountains. It is modelled upon a more gigantic scale than England. Its rivers are longer; its distances are more vast; and its hills, though perhaps not higher than British hills, are more sweeping in their forms, and less striking in outline. Exception however, is to be made in favor of a large portion of Brittany, the valley of the Seine, in its progress through Normandy, the country of the Auvergne, and that part of Burgundy adjoining the Juras.

Not only, however, is it in variety of surface, that England surpasses France, but in those country adornments, which make up the pleasing rural aspect of the British isles. The French farm house, though substantially built of stone, and stuccoed, and convenient in its interior arrangements, has nowhere the prettily thatched roof, the embowering vines, the rich shade trees, the encircling bit of turf, the scattered flowers, the latticed windows, which belong to the English cottage. Add to this, the unattractiveness of its situation, upon the middle of some broad plain—instead of quiet nook or valley, or pleasant knoll—so common to English landscape, and one may readily imagine the superior beauty of the island farmery.

Again, the French cottage, in most situations, has few or no hedges. Its offices are all thrown together within one common enclosure of high stone walls. From the road, you enter by a large gateway into a slattern court, about which carts are dropped here and there, and poultry scratching in the accumulated dirt, and swine, perhaps, rooting about the stagnant pool in the middle. On one side of this court will be the doors and windows of the farm-house—its walls white, where not befouled with dirt—its roof of heavy red tiles, and its chimney stiff and clumsy. There is no vine beside the door—not even a rose tree, or violet, or morning glory; but there is a studied neglect of these little charms which would not do discredit to many New England farmers. The sun shines hotly upon the white walls, and upon the red roofs of the offices by its side.

Sheds of timber, and roofed with tiles, stretch around upon another side of the court, for the animals and best constructed implements. A barn and granary of the same sort of construction lie upon the third side of the court, and the entrance gate, with its high flanking wall, make up the fourth.

In the more pretending establishments, the farm-house stands removed from the common court of the farmery, and connects with it by a little wing thrown back upon the offices.

The garden adjoins the enclosure, with its skirt of fruit trees, stragglingly disposed, except in the orchard provinces, where their disposition is neat and beautiful.

Fences, in the plain country—the country most seen by the casual traveller—are very rare; neither hedge, or ditch, or wall, and the junction of farms or estates is designated by rows of trees, or mere ridges of turf. In the vine-growing countries, particularly such as furnish the best wines, as Medoc and Burgundy, division of property is marked simply by lines of vines, and size of vineyards is reckoned only by the number of lines.

The great roads are broad and macadamized, with frequently a strip of grass land upon either side, which is depastured by cows tethered to stakes, or by sheep under guardianship of dogs. Rows of trees border the way, and beyond are yellow, broad-waving fields of grain, barley and wheat; or perhaps the land is covered with a light grass, on which immense flocks of sheep are feeding. The first may be seen on the route to the east, leading through Auxerre; the sheep abound toward Chateauroux.

Again, upon the best of the grass meadows, eastward toward Dijon and Dole, you may see great herds of cattle, or in the valley of Limousin you will see scores of horses.

Turning away from the great routes, one finds little bye-lanes, which, with their trees and occasional hedge rows, will remind of England. The farm-houses, too, upon the cross country roads, while they are more unpretending in aspect, have more of that rural simplicity which makes much of the charm of an English cottage.

The canals, stretching over the plains, are not unfrequently gracefully shaded with willows, or lindens, and the sight of their shining surface, glimmering through a copse, the high-collared, heavy Norman horse, toiling along the tow-path—the quaintly clad laborers, singing at their work in the fields,—with the cone-topped towers of some old chateau lifting behind the wood, make up a fresh bit of French picturing in my mind.

Gentlemen's seats, with lawn, and gate lodge, and park enclosure, and troops of deer, come rarely under the eye in France. The French character is not prone to ruralities. Even the amusements of the peasantry partake of a civilian character; dancing, and music, and gallantries of speech, relieve the tedium of field labor, in place of cricket, or bathing, or fishing. Nor is it easy to find a French peasant who does not wear a courteous air. Even the old woman of the little auberge, where you stop to lunch, receives you with a ready *politesse*, that in the country districts of New-York would pass for city breeding.

The country villages of France have peculiarities, which it may be worth while to note in a separate paper.

Food for Milch Cows.—At a large milk establishment near Newcastle, England, the cows are fed in the following manner: 91 pounds of clover hay, (cut or chopped,) 168 lbs. brewer's grains, 12 lbs. ground flax seed, 2 lbs. salt, are mixed together, and equally divided as the daily food for twelve cows. The hay, after having been cut, is put into the mash tub and scalded with boiling water. The other articles are then mixed with it. It is stated that a good cow thus fed, will yield an average of fourteen quarts of milk per day, for eight months in succession. The owner of the establishment, (Mr. Arundale,) stated that he had one cow which had not had a calf for two years and a half, that was giving an average of eight quarts per day. A great point observed is, that the cows never fall off in condition.

MICHIGAN AS AN AGRICULTURAL STATE.—No. II.

Oak Openings of Michigan.—Those portions of Michigan which are classed as "openings," are usually a beautifully varied country, sparsely timbered, chiefly with oaks. Among the several species of these, the white is predominant, and has the largest growth; next the black or yellow and burr oaks. Hickory is often intermixed to a considerable extent. What are called "plains," resemble the openings, but have less timber, and are often almost destitute, approaching the character of "prairies." Somewhat more than half of the peninsula consists of openings and plains, and these are occasionally varied by tracts of heavily timbered land, and by prairies destitute of timber. The latter are not frequent, and are of much less extent than the prairies of Illinois, comprising from a few acres only to 15,000 acres. "Marshes," or wet prairies, frequently occupy the hollow and level spots of the openings and plains, and consist of an accumulation of peat and vegetable matter, producing a rank growth of wild grasses, beds of *marl*, or bog lime, are very common beneath the peat. These grasses are relished by all kinds of cattle, and are so abundant and esteemed that in many parts of the country they constitute the only winter fodder of cattle, horses, and sheep. Many farmers think them preferable to any of the cultivated grasses, for all kinds of stock, and though most of the marshes are subject to drainage, prefer to leave them in their original condition. To new settlers these marshes have proved invaluable, by enabling them from the first to support their stock with scarcely any cost. A large proportion of these marshes are due to the labors of the beaver, and they are susceptible of being restored to their original dry state. Some of them have been made by drainage to produce an exceedingly rich soil, for both grass and tillage crops. The immense accumulation of peat and lime which they contain, will, at a future day, furnish a rich treasure in these manures, which will be most needed upon the adjoining uplands.

The soil of the openings is usually a dry porous gravel or sand, belonging to the drift deposit already alluded to in my general description of Michigan, but there are portions which have a considerable intermixture of clay.

Local beds of clay are not uncommon at or near the surface, from which good bricks are made. At depth of from two to three feet, there is very generally a *hardpan*, sufficiently cohesive to prevent the too rapid absorption of the water which falls upon the surface. No difficulty is experienced in obtaining pure hard water, by digging, though the depth varies according to the local character of the drift.

Many speculations have been originated to account for these peculiar features in the scenery of Michigan; among the most prominent of which is, the ravage of annual fires. As it is not desirable to involve the subject in theoretical considerations, I shall only say, that no one cause which has been mentioned is sufficient to produce all the characteristic features of the opening country of Michigan. The fires, which were formerly designedly created, kept down the underbrush, which otherwise would have sprung up thickly over the surface; but there is also direct evidence that the kind and character of the timber changes with the varying conditions of the soil. Thus, while the prevailing timber of the openings is white, with intermixture of ack oak, the latter occasionally predominates, and the growth is more or less dense or scanty as the combination of causes has been more or less favorable to the particular result. The burr oak usually occupies level tracts, and the soil is coarse and gravelly. Some of the best wheat farms are on these plains. Hickory occurs where there is a larger proportion of aluminous matter in the soil. A heavy and varied growth of hard wood timber frequently occurs over isolated tracts in the openings and along the banks of the streams, and this character of timber is almost invariably found wherever the extensive blue and yellow clay formations lie at small depth beneath the surface, as will be more particularly noticed in my next communication.

When first turned up by the plow, the soil of the openings and plains is generally of a deep yellow color, and its appearance, in connection with the light growth of timber, is little indicative of the strong and lasting soil it is found to prove. These soils are well supplied with vegetable matter, which on exposure, soon converts this yellow color to a dark brown. But it is their mineral and mechanical characters chiefly, which have been already noticed, that so admirably adapts them to the culture of wheat, and renders that a staple product.

The surface of the openings, when new, is generally filled with the roots and "grubs" of oak, and requires to be broken up by strong teams. This is the chief expense of preparing them for cultivation, and costs from $2.50 to $4 per acre. It is common, when the timber is but moderately dense, to girdle the trees, without felling them, and thus a crop of wheat may be got in the first fall, and the timber cut or burned afterwards at leisure. The breaking-up teams consist of from three to six yokes of oxen, and every neighborhood furnishes one or more such teams, which may be hired for the purpose, or else a system of mutual exchange is adopted.

For beauty and diversity of scenery, these portions of Michigan are unrivalled. Many parts of the country abound with lakes of the purest water, which are always well stocked with bass, pickerel, and other fish. They repose in the midst of groves of oaks, which from their picturesque arrangement, seem as if planted by the hand of art, to adorn the landscape. Varied by hills, lawns, and grassy meadows, these features give to the openings that quiet beauty and diversity which is adapted to the most cultivated rural taste, to perfect which has so often elsewhere required the labor of ages.

The chief advantages offered by the openings over the timbered lands, may be thus briefly summed up:—The rapidity with which they may be brought into crops; their freedom from stumps; the cheapness and perfection of the roads; the ease with which cattle find subsistence; and the abundance of those salts which adapt them to the growth of wheat. The disadvantages are, the occasional scarcity of water in summer, except by digging, and the absence of various large and abundant timber. **B. Hubbard.**

Detroit, June 1, 1847.

Iron-Water for Fowls.—A writer in the English *Agricultural Gazette*, recommends that a piece of steel be kept constantly in the water to which fowls have access. Iron-rust, he says, is an excellent tonic. A roll of brimstone is also recommended to be kept in the water.

BREEDING HORSES—No. III

We have but few breeds of horses in this country. The breeding of these animals is not here carried on with that system, and with a view to the establishment of distinct varieties, that it is in England. We have the race horse, more or less, in different parts of the country. In Canada, we have a variety of the horse originally introduced from France; but now much stunted, in general, from the severity of the climate and the scarcity of food, though still preserving in a marked degree the leading features of the parent stock. In Pennsylvania we have a branch of the Flanders stock, introduced by emigrants from Germany and the Netherlands. They are in some instances bred with considerable care, and exhibit the large size and peculiar form of the heavier class of draught horses. We have occasionally had brought here from England, different varieties of the cart and draught horse, but they are not bred by themselves to any extent.

Of roadsters we can scarcely be said to have a distinct class. We have had good horses of various blood, but none of these have been bred long enough by themselves to form a fixed breed. The "Morgan" horses, so called, whose origin and history have appeared in the former pages of the Cultivator, are a stock well calculated for light carriages, and have great activity, strength, and hardiness. Mr. R. L. Allen, in his *American Agriculture*, describes this stock as follows:

"As an illustration of what may be accomplished by judicious breeding with the present materials, in our hands, we may mention one family of the American roadster, which is strongly tinctured with blood, and which has attained an enviable notoriety among the choicest of the northern horses. They are derived from the *Morgan horse* of Vermont, that was foaled in Springfield, Mass., in 1793. * * * The Morgan horse stood in Vermont till his death at an advanced age. From him and the choice mares of Vermont, descended many excellent colts; and his merits were inherited in an eminent degree by three of his sons, which stood in the same state, [and in the adjoining state of New Hampshire,] and continued the career of improvement commenced by the sire. The result has been the production of a family of roadsters of much similarity of appearance and uniformity of character, unsurpassed by any others for serviceable qualities. They are of medium size, from 13½ to 15 hands high; with a well formed head and neck; high withers; deep chest; round body; short back; long quarters; broad flat legs; moderately small feet; long, wavy mane and tail; presenting altogether the beau ideal of the road horse. They are spirited and docile, hardy and easily kept. They have an easy rapid trot, and glide along with a good load, without clatter or apparent effort, at the rate of 10 to 12 miles an hour. This family of horses has not of course been bred long enough within themselves to have attained the eminence of a distinct breed. They are mentioned as a type of what the serviceable roadster ought to be, and what he may become by the use of the proper instrument for breeding."

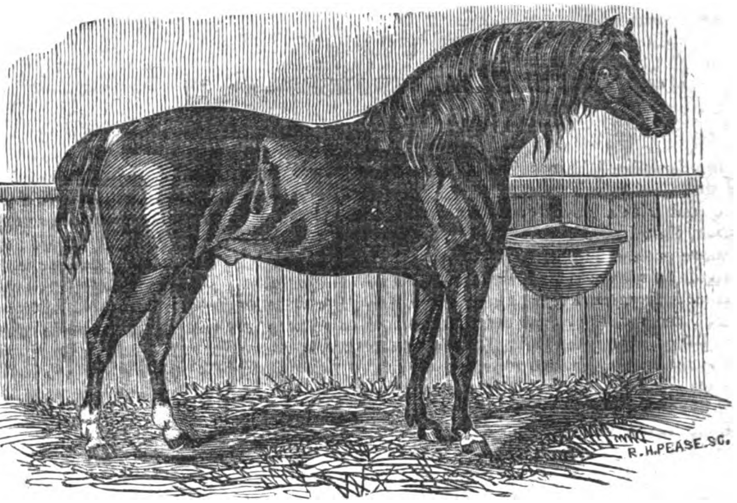
This is certainly high, though perhaps not undeserved praise for the Morgan horses. Mr. Allen must be regarded as a disinterested and unprejudiced individual, and his knowledge of horse flesh in general will not be called in question. There is no doubt that by proper selection and due attention and care in breeding and rearing, the leading characteristics of the Morgans may be preserved, and that in process of time they will become a well-established variety.

The figure at the head of the next page, represents a stallion of the variety called Norfolk Trotters, which has been cultivated with great care, for many years, in England. The portrait was taken for the "Norfolk Phenomenon," (sometimes called the "Norfolk Cob,") and was originally published in the (London) *Farmer's Magazine*, for October, 1845, from which I take the following description. He was bred by Mr. Burgess, of Wall Fenn, and was got by that justly renowned horse Young Fireaway, a famous trotter who challenged all England, after beating Mr. Slade's celebrated mare, in a match for four hundred guineas, on Sunbury Common. Young Fireaway was of course by *Old* Fireaway, out of a very fast mare by old Marshland Shales, one of the best trotters ever known, and who accomplished the then unrivalled feat of seventeen miles within the hour, in a match he ran, [trotted,] with and beat the equally celebrated Driver. The subject of our portrait is described as "a brown bay, rather over fifteen hands high, with capital shoulders, fine forehead, remarkably neat head, well put on, short back and powerful loins, arms long and very muscular, and legs clean as when foaled, and short from the knee to the ground. He is completely master of twenty stone, [160 pounds, eight pounds to the stone;] an extraordinary good walker, a very fine and high goer in his faster pace; and, in fact, as the portrait proves, as good a specimen of a Norfolk Trotter as ever was seen." As proof of his excellence as a stallion, the fact is stated that he covered for *fifteen years* in the same circuit. He was then bought by Mr. Howlett, of Bath, who kept him for two years, and sold him to Sir William Coddington, by whom he was sent to the West Indies. Those who are acquainted with the Morgan horses will readily perceive that the points delineated in the above portrait, are quite similar to those exhibited by that stock.

At the present time there is a valuable breed of horses in Normandy, France, used for the transportation of those ponderous vehicles called "diligences," the stage coaches of that kingdom. They are said to possess great power with considerable speed—moving with the heavy loads they are obliged to carry, from seven to nine miles an hour. Many of them evince much greater speed. The origin of this breed is said to have been a cross between the Andalusian horse of Spain with the old French or Norman draught horse. By breeding the stock thus produced, by itself, a race has been established which is as well marked by its own peculiar characters and qualities as any breed in Europe.

A few horses of this breed have been brought to this country, and from the success which has attended a cross from them with our country mares, there is good reason to believe that a valuable stock of roadsters might, with proper care, be produced in this way. The progeny of the horse called "Norman," owned by Mr. Morse, of Lansingburgh, N. Y., and that of "Diligence," imported and owned by Mr. Harris, of Mooerstown, New Jersey, are referred to as proof of the excellence of such a stock.

With regard to the best course for improving our horses for the carriage and road, the first object should be to preserve the best stocks now in the country. Such families as those above named, and others of



NORFOLK TROTTER—Fig. 59.

value, should be bred with strict care, and sufficiently by themselves to insure uniformity of character. It being the constant endeavor to breed them as much as possible to one standard or model, no blood should be admitted which would be likely to cause a deviation from it. This course should be pursued for many years, until the peculiar qualities of the stock become so fixed in the blood that they will be transmitted with a good degree of certainty.

The formation of clubs, in different neighborhoods, for the improvement of the breed of horses, might be productive of great advantage. It should be an object with such clubs to secure the best mares, which should be bred to the most valuable horses. The rules of the clubs should be as few and as simple as possible. The mares may be owned separately, by individuals composing the club; but they should all be such as the club, or a committee appointed by it, should approve. The stallions should be owned by the clubs. They should be selected by individuals appointed by the club. The club should have the sole direction in regard to their use; they should be kept at joint expense, and the proceeds arising from their services, should be divided in an equitable ratio among the members.

This business may undoubtedly be made profitable. The clubs, if properly conducted, would soon establish a favorable reputation. They should offer none but the *very best* stock, and such would be certain to meet with a ready sale at remunerating prices. In my next. I shall speak more particularly in regard to the proper rules of breeding, rearing, and management.

Equus.

REARING AND FATTENING HOGS.

A correspondent in Albemarle county, Va., writes,—"Will you give me specific directions for rearing and fattening fifty hogs? That is to say, will you tell me if I ought to keep them confined the year round, or for what length of time and what quantity of different materials should be planted for their food, and at what times, in this climate?"

Our acquaintance with all the circumstances having a bearing on the subject, is not such as enable us to furnish "*specific* directions." If he rears his hogs from the "start," we should think it would be best to have the pigs farrowed at a time when the sows could be turned on clover, and it would be well if they could have a small range on clover or grass for a week or two before farrowing. We would allow them to run here together till the pigs were five or six weeks old, giving the sows such dairy slops as the farm afforded. If there were no skimmed milk or whey for them, we would feed with slops, made of corn-meal and shorts, in equal parts, scalded and allowed to ferment *slightly*,—not to become *sour*. After the pigs are a week old, the sows may be allowed as much as they will eat, but none should be left in the trough from one meal to another. If milk can be had for the young pigs, at the rate of a quart each, per day, they may as well be taken from the sows at five weeks old; but if no milk can be given, it is advisable to keep them on the sows till seven or eight weeks old—feeding the sows well during that time. If pigs are taken off too young, and have not milk given them, they are likely to become pot-bellied, and crooked-backed, owing to their digestive organs not having acquired sufficient strength to bear the food which they are obliged to eat. Their constitutions are frequently so much injured in this way, and their shape so much distorted that they never recover, and never become what they might have been had they received proper treatment. It should, therefore, be made a rule, to allow pigs the milk of their dams, or milk from cows, till they have reached such an age that they can thrive on other food. The great object should be to keep them *constantly growing*. They should not be full fed and made fat at one time, and starved and made poor at another. The farmer should remember that the loss of a pound of pork wasted from the carcase of a live hog, is just as much of a dead loss, as though it had been lost from his pork-barrel or smoke house. Hence his swine should never grow poor, but should gain something every day though it may be expedient to have them gain faster at some periods than at others.

When pigs are first taken from the sows, it is a great assistance to their growth, to have their food cooked. Raw Indian corn or raw corn meal, is not easily digested, and it has a great tendency to sour on the stomach, and to induce dyspepsia. These objections are in a great degree obviated by making the meal into good stiff mush—(Yankee hasty-pudding)—mixing with the Indian meal a third part shorts or oatmeal, and adding about the same quantity of salt as is applied to mush made for table use. Should the food, after having been duly prepared, produce in the pigs a tendency to scour, charcoal should be allowed them; it will, indeed, be advisable to allow them plenty of this substance at all times, as it promotes their health and thrift.

In separating the sows and pigs, it is better to let the pigs remain in the lot where they have been kept, if the feed is good enough, as they will be more quiet than if taken to a strange place. Dry and comfortable shelter at all times, with cool shade in summer, should be provided.

The pigs may run on the clover till frost puts a stop to its growth. They should then be put in a warm pen with a small yard attached, and well supplied with straw or leaves. If it is intended to kill them in the fall, or in the course of the winter, it will be important that they are always fed about as much as they will bear, otherwise they will be lacking in size. If they can be brought to the dressed weight of about two hundred pounds at eight months old, (as they frequently are at the north,)it is generally more profitable to kill them at that age than to winter them over and kill them the next season; but unless they have the benefit of some dairy slops, they will require close attention to make them reach these weights. If the farmer decides to keep them till they are eighteen to twenty months old, they may be fed through the winter something in proportion to the quantity of food at his disposal. They should at all events have enough to keep up their condition, and if the food is on hand, it may be fed as profitably now as at any time; but if they are made *too* fat, it may in a degree disqualify them from grazing the next season. With hogs which are inclined to grow fast, there is not, however, much danger of this—the increase in weight being rather muscle than fat.

The second season they may be turned on clover, as before, and be fed moderately through the hottest part of the season. As the weather becomes cool in autumn, the feed should be increased, and by the last of September it will probably be best to take them from the fields and put them in the fattening pens. These should be so constructed that the hogs may be readily kept clean and comfortable. They should have an apartment to sleep in, another to feed in, and a third in which to void their dung and urine. Quietude favors the secretion of fat; therefore whatever promotes the animal's comfort, is equivalent to food. They should be fed at regular intervals, with as much as they will eat.

As to the kind of food, much must depend on circumstances. In Virginia, we presume, Indian corn will most advantageously form the leading article. In general, it should be ground, though with the light "gourd-seed" variety, there is less advantage in grinding than with the more flinty sorts, as it is more easily and thoroughly masticated and more perfectly digested. A hog, however, can extract the nutriment from a small daily allowance of hard corn; but if full fed he cannot thoroughly digest it, and more or less nutriment is wasted. If the farmer is not within a convenient distance of a mill, it will be expedient for him to set up a small one, to be worked by horse-power. One of FITZGERALD's mills may be had for $60 or $70, (according as they are geared,) or one of HOWARD's at $35. With the power of two horses, they will work up from three to twelve bushels, of any kind of grain an hour, according to the fineness required. One of PITTS' corn and cob cutters, which chops up grain to about what is called "coarse feed," can be had for $40, and with a two horse-power, will readily grind ten to twelve bushels an hour.

The expediency of cooking, too, will depend something on the situation in which the farmer is placed as to the facilities for doing it—such as the value of labor, fuel, and the cost of preparing proper apparatus. We believe it has been demonstrated, however, that a gain more than sufficient to pay the cost, is generally realized by cooking. MOTT's furnaces, described in our last No., are the best articles for cooking we have seen.

There is an advantage in using a variety of food. A proportion of apples, potatoes, or pumpkins, keeps up the appetite, and makes the animals thrive faster than on corn or meal alone. If the food is cooked, it is best to mix these various articles together, changing and varying the articles from time to time, in order to promote the appetite

As to the "quantity of different materials that should be planted for the food of fifty hogs, and at what times," we cannot answer, for the reason that we cannot tell what the yield of the crops would probably be, nor what would be the proper time of planting in the latitude referred to.

We are in possession of no definite rule in regard to the quantity of food which hogs require. Some persons allow two quarts of corn daily to each hog of 200 lbs. live weight; and according to some experiments made in Essex county, Mass., a bushel of corn may be expected to make twelve pounds of pork. (See an article in our last under head of "How much pork will a bushel of corn make.") But a fixed rule in the case is out of the question.

In the above remarks we have had regard more particularly to the interior of the country. In situations where manure is very valuable, it may not be an object to turn the hogs on grass or clover, but may be better to keep them shut up in order to make compost.

EDITORS OF CULTIVATOR—The humane and benevolent expression of Sterne, to a fly, "Begone, poor thing, there is room enough for thee and me in the world," is far exceeded by the tender humanity displayed in the following little article from the Kennebeck Gazette. It possesses a peculiar strain of refined sensibility and natural pathos, which render it highly deserving of preservation in your valuable publication. A. OF THE NORTH.

SONNET TO A FLY.

Son of summer—child of leisure,
Buzz not thus around my form;
Little gilded speck of pleasure,
Tease me not, for I am warm.

It would grieve me sore to wound thee,
Pain my heart to do thee harm;
Keep not buzzing then around me,
Tease me not, for I am warm.

Go and play around the ceiling,
Safe from every inwarc storm;
Go and trust an honest feeling,
None will come to do thee harm,

Little son of summer, go,
Prithee do not tease me so.

CHALYBEATE SPRINGS, are so named from holding iron in solution. It is believed that the brown sediment which may be sometimes observed in pools and shallow water-courses, is occasioned by the cast-off skins of minute animalculæ, (infusioria,) the principal constituent of which is iron. These creatures are invisible to the naked eye, but are readily discovered by the microscope. It is said that such exuvia have accumulated in some districts in such masses as to form immense beds of ore.

GREEN WOOD AND DRY.

We have been favored with another communication on this subject from our friend J. Townsend, of Zanesville. But, as it is long, and perhaps inappropriate at the present time, we conclude to omit its publication, and we doubt not our correspondent would approve of this at least in part, were he to read over again, carefully, his remarks. We may, however, state that the principal point he urges—his chief argument against the correctness of the calculations of T. referred to, consists solely in a *proposed* experiment. By this proposed experiment, he expects it will be shown that a great deal of inflammable matter is driven off in the evaporated sap from green wood, which is thus injured in quality. Actual and carefully conducted experiments must decide such conjectured results.

We also give below, a communication from J. R. W. It may perhaps excite surprise that there is so much discrepancy in his results and those obtained by the calculations of T. This discrepancy is owing to two causes. *First*. A different mode of computing. The calculations of T. were based on the measurement of the old English gallon of 231 cubic inches, and the barrel of 32 gallons; while those of J. R. W. take the new or imperial gallon, as established by the British parliament, which contains 277 cubic inches, and the barrel of 36 gallons. These would make a difference of nearly one third in the amount. *Secondly*. He assumes that the specific gravity of *green* hard wood, is 0.755, that of water being 1.000. If he has taken this specific gravity from the distinguished authorities he cites, he is led into error probably by *their* figures applying to dry wood while he understands it to apply to green. Most kinds of dry hard wood, *after seasoning*, have been found to be about three-quarters as heavy as water; and while green, unless containing a large portion of heart wood, is scarcely any heavier than water. The smaller branches of green beech in most cases, immediately *sink* in water. Some kinds of green wood are *lighter* than water; and so far as the calculations of T. apply to such, he was in error, and no farther; but in most cases this error would be exceedingly small, and often nothing. So far, also, as the Imperial British gallon, and the barrel of the act of parliament, is to be preferred to the old gallon and barrel, T. was in error, but no farther.

The argument of J. R. W. that wood does not lose "a third of its *bulk*," and consequently, does not lose a third of its *weight*, appears to be based on the supposition that it never alters in specific gravity, which is quite an error—a sponge may lose three-quarters of its weight of absorbed water, and retain its original size.

J. R. W. erroneously supposes that T. intended to expel *all* the water of wood by seasoning—such a thing was never thought of. In the experiments made by T., the decrease in weight by seasoning was *more* than one-third; hence he considered it safe for ordinary cases to assume one-third merely.

Experiments and calculations of this kind, must as a matter of course, vary in results. Wood varies in specific gravity—in the compactness of the cord—in the degree of seasoning—and a variation in the measures employed, will alter the amount. A cord of wood consisting of small crooked branches, may have two-thirds of interstices—or a cord of very straight large wood, may not have a quarter of interstices. In the latter case, a still greater amount of water would exist than the six barrels given in the estimates of

T.

Messrs. Editors—Though by no means desirous of backing J. Townsend's observations on the communication signed T., respecting the merits of dry wood,—still, T. asserts what I have no doubt he will admit, is an error, in saying that a cord of green wood contains "more than six barrels of water," and now then to the proof.

In the first place, I am willing to admit that wood when fresh cut, contains one-third of water, *by weight*, and also that a common cord of fuel wood contains 77 solid feet; but T. has proceeded to make his calculations by measure, which is not just the thing to do, seeing that wood does not lose in drying a third part of its bulk. The object is to find the weight of these 77 cubic feet, then to take a third part of that weight of water, and find out how many barrels it affords. Now, taking maple wood as the mean between birch and beech, it will be found to weigh three-fourths of water, the specific gravity of maple being 0.755, whilst water is 1.000. A cubic foot of water weighing 62 lbs. and a fraction, three-fourths of this would be 46½ lbs. for a cubic foot of maple wood, which multiplied by 77, the number of feet in one cord, gives 3,580½ lbs. as the weight of a cord of ordinary green wood. We must then take one-third of 3,580 as the weight of water contained in it, which is 1,193 lbs., and dividing this by 10, the number of pounds (omitting fractions,) which a gallon of water, beer measure, weighs, we have 119 gallons, which again divided by 36, the number in a barrel, gives 3 barrels and 11 gallons as the amount *instead of over six*, as stated.

Your correspondent T. is equally in error, when he says that the teamster, drawing 100 cords of green wood, draws 600 barrels of water (but which, as shown above, are only 330 barrels 30 gallons,) which he need not have done had the wood been cleft a year in advance.

Wood that has been cut and corded for twelve months, but exposed to the rain and damp atmosphere of the forest still retains from twenty to twenty-five per cent. of moisture. Suppose we allow twenty-two, having called the original quantity one-third, or thirty-three per cent., so that he would still carry 220 bbls. 14 gallons. Nor would the fuel, even if placed in a well boarded shed for a year longer, part with all the moisture, but even then retain nearly 11 per cent., or 110.7 of water—charcoal having been found to absorb that quantity from the atmosphere, after a few months' exposure under a shed.

Wood can no doubt be rendered quite dry by artificial heat, carried to the commencement of charring, but its power as a fuel is thereby impaired, and it must be well varnished to keep it so—so that even yourselves, Messrs. Editors, with your well arranged hot air stove, and dry wood, must be content to evaporate your barrel and odd gallons per cord.

I might go on to show T.'s errors, also, as regards the loss of heat in open fire-places, but it is getting rather late in the spring for such warm calculations, and I have already trespassed too long, and must conclude, with a desire, if any gentleman, with a superior lot of very dry firewood doubts his share in this general evaporation, let him, some clear frosty morning, having first made a jolly fire of his best wood, don his cap and mittens, and step outside his dwelling to a sufficient distance to make an accurate observation on his domestic flue. J. R. W.

P. S.—My authorities are Rees' & Brewster's Encyclopædias, Dr. Ure, Watt, Dr. Black, Rennie, and Lavoisier. Taking no account of the heat given out by the steam in its passage through 40 feet of stove-pipe, which is nevertheless something considerable, the account will stand thus:—

Dry Wood.

Fuel wood, birch, beech, and maple—cut and dry stowed for 18 months,............	100 lbs.
Deduct 11 per cent. for water retained,.......	11
	89

Green Wood.

Fuel wood, as other side, fresh cut,....................		100 lbs.
Deduct 33 per cent. water retained,........	33	
Also, necessrry quantity of green wood to heat said 33 lbs. to 212°, 2 lbs.—to evaporate, 7 lbs.,......	9	
		42
		58

LAWNS AND SHADE TREES.

There are two great defects in rural improvements, so far as the beauty of the country and the comforts of home are concerned, namely, expending too much in building, and too little in planting trees. The great desire is to have a fine house—large, two-story—amply supplied with parlors and drawing-rooms, with their costly furniture—while outside, a single half-acre can hardly be devoted to respectable appearance or comfortable shade. The stately dwelling stands alone like a castle in the wilderness, with Brussels carpets and mahogany sofas within, and a hog-pen, calf-pasture, common rail fences, and perhaps two rows of pie-cherries, to grace the scenery without. Or, perhaps, a picket fence is made on the side next the road, of a length precisely equal to that of the house; and a few lilacs and rose bushes, planted in straight lines in the front yard, add much to the appearance, provided the traveller shuts his eyes, until at a point precisely at right angles to the front door of the dwelling.

Now, every farmer who owns fifty or a hundred acres of land, all paid for, and has any other shrine than "Dollar," at which to worship,—should devote two or three, or at the very least, one acre, to a snug little plantation of trees or shrubbery, to encircle his house, and to render it attractive and comfortable to all the members of his family. And in order that he may be "*able*" to do this, if he has not yet built, deduct one quarter from the size and cost of his house. It is better to have smaller rooms or fewer of them, with rich green trees and blooming shrubs in sight from *every* window, *back as well as front*, than to occupy a stately castle, with bare fences and rough grounds without. But even this sacrifice, in building, need not always be made, for planting costs but comparatively little; and, as Willis says, "nature lets the tree grow and the flower expand for man, without reference to his account at the bank." The man who does not like the trouble or expense of keeping in order beds of ornamental plants and flowering shrubs cut in the turf, may surround his house with large, rich, massive shade trees, distributed singly and in groups, which, after once under way, need no further attention than to keep the green grass closely shaved with the scythe beneath them. This mode of planting is unquestionably *the* one for farmers in general. Even the gravel walks may be entirely dispensed with. For it would cost more to keep them in the best order than to keep the two or three acres closely shaven to within an inch of the ground; and a neglected walk is quite as bad in appearance as a neglected beard on a man's face.

Those who have only seen handsome plantings, composed entirely of maples, or entirely of elms, can form but a poor idea of the rich and varied beauty resulting from a tasteful combination of majestic oaks, graceful elms, broad chestnuts, intermingled with the feathery plumes of the ash and the acacia, and the heavy green masses of the black and sugar maple, with the occasional silvery flashes from the abele and red maple; while the spiny tops of the dark evergreens will give a character to the whole.

It is impossible to form a good combination of this kind without some taste—and taste must be improved and cultivated. There is, perhaps, no better way to do this than to observe living specimens—every man who rides through the country with his eyes open, may, at the present season of the year, see frequent instances of fine trees and natural groupings, from which he may derive many valuable hints for practice. To those who are thus studying nature, and preparing to plant, a list of some of our finest forest trees may be useful.

Elm.—The common American elm, (*Ulmus americana,*) is a tree greatly admired for its combination of the graceful and magnificent. Its enormous rounded head of foliage in soft rolling masses, and the luxuriance of its pendant branches, present a most striking appearance. Trees taken from the woods are difficult to transplant successfully; the best are raised from seed. Such will usually soon outgrow those from the woods. A gentleman near Albany, who plants many from seed, has had them twenty-one inches in circumference when only eleven years old.

Oak.—Downing justly remarks, that "the oak is not only one of the grandest and most picturesque objects as a single tree upon a lawn, but is equally unrivalled for groups and masses. There is a breadth about the lights and shadows reflected and embosomed in its foliage, a singular freedom and boldness in its outline, and a pleasing richness and intricacy in its huge ramification of branch and limb, that render it highly adapted to these purposes. Some trees, though pleasing singly, are monotonous to the last degree when planted in quantities. Not so, however, with the oak." There are many species of the oak, which, though varying considerable in external appearance from each other, all possess the peculiar characteristics described above.

Black Walnut.—One of the finest of all shade trees, when large, possessing a fine combination of majesty and grace. Though of a light plumy foliage, it has in size and outline, much of the dignity of the oak.

Tulip tree.—Belonging to the same natural order as the magnolia, and remarkable for its rich glossy foliage, and the majestic form which it assumes when large.

Maple.—There are three very fine species which attain the size of large trees. The sugar-maple, remarkable for its round head, and very dense, deep, clear green foliage; the black maple, possessing softer, richer, and more rounded masses of foliage, and fully equal, if not superior, to the other for luxuriance and denseness of growth; and the red or scarlet-flowering maple, brilliant when in flower early in spring, and remarkable for the silvery flushes of light it presents, when its masses of foliage are rolled up by the wind. It is much more rapid in growth than the red and black maple, and though usually found in swamps, succeeds finely on upland.

Chestnut.—A very fine tree, partaking much of the character of the oak for a broad and picturesque outline—when in flower, its light green blossoms mingled with its deep green leaves, give it an uncommonly rich, variegated appearance.

The *American Aspen* is remarkable for its very early lively green foliage, and the constant motion of its leaves in the lightest breeze.

The *White Ash* forms a very large, round head, of fine feathery foliage, which assumes a deep reddish purple in autumn. As the tree draws hard on the soil, it should be introduced sparingly.

Basswood.—Its large leaves, of a lively green hue, and its large, dense, pyrimidal head, render it a very fine shade tree; but being more formal, and less varying and graceful in outline, than some others, it should be more sparingly introduced.

Spiry evergreens are to be placed more or less in near proximity to some of the more upright or pointed deciduous trees, by which they are made to form a harmonious whole with the rest of the plantation.

The piece of ground intended for planting, should be made rich with manure for at least a year or two previous, which should be worked deep into the soil by plowing; loosening with the subsoil plow so as to admit of deep trench-plowing will be of great advantage. This depth of rich soil will not only cause a more rapid growth to the trees, and give a finer and more luxuriant appearance to their foliage, but the lively green which the turf will exhibit subsequently, will be in striking contrast to its withered and brown appearance on a thin, hard soil.

The owner may be at a loss how to arrange his trees to the best advantage. Let him then try to imitate as nearly as he can, "with additions and improvements," the finest natural groupings he can find in the country.—or the best specimens of a finished natural style to be found in good paintings or engravings from eminent artists. These will afford an excellent guide, and cannot lead him wrong, if he possesses any natural taste.

The surface of the ground is to be made as perfectly smooth as possible, so as to admit of mowing within half an inch of the ground, without striking stone or hillock.

The grass seed, of which red-top and white clover form a good mixture, should be sown early in spring, at least three times as thick as the farmer would ever think of seeding his fields; a fine, dense carpet of young grass will then be soon formed. Never, on any account whatever, think for a moment of sowing any kind of grain with the grass seed. It will do incomparably better without.

A smooth, fine velvety turf, is only to be maintained by constant mowing, or as often as once in one or two weeks. During the most rapidly growing time of year, once a week will be needed, but less frequent at other times. One who has never seen this mode of treatment, could scarcely believe what a soft, green carpet is thus produced. A single mowing once a month or so, will afford no idea of the closeness of growth which grass thus assumes. To shave closely and evenly, the scythe, in the operation, must be laid flat to the ground; and an English lawn-scythe, with a blade twice the width of our common scythes, will leave a more even surface.

Now, if the man who intends to build a house costing two thousand dollars, will only reduce the cost to fifteen hundred, he may expend two hundred dollars of the difference in preparing the ground and planting the trees in the very best manner. The other three hundred he may place out at interest, the yearly revenue from which will pay amply the man for mowing the lawn at least once a fortnight, the summer through, and imparting an additional charm to the place, which no sum of money whatever, applied solely in building, could ever produce. Or, if instead of buying a two hundred and fifty dollar carriage, or a seventy dollar harness, or a five hundred dollar piano, he will omit the purchase of such of these as are unnecessary, or retrench one-third of the cost of such as are useful, he will be able to accomplish all that may be desired, for this truly rational, useful, intellectual, and most delightful purpose, and render his children altogether and more really and substantially happy, than in the gratification of useless baubles. T.

LETTERS FROM PROF. NORTON.

London, July 5, 1847.

Messrs. Editors.—I have left Holland, and commenced my homeward journey with a feeling of regret that my chemical pursuits have almost wholly prevented me from devoting the time necessary to a thorough investigation of the different systems of Dutch farming. It would doubtless have been both interesting and useful to occupy a month or six weeks in an extended tour through the whole of the Netherlands, including that part of Belgium called Flanders. My time being limited, however, I felt obliged to take the way which seemed to promise acquisitions of most importance with regard to my future occupation at home, and therefore confined myself almost entirely to the laboratory.

Two or three weeks since, however, I got away for a few days, and made, among other excursions, a short one in North Holland, an account of which I propose to give you.

North Holland is a long peninsula, having the North Sea on one side, and the Zuyder Zee on the other. A large part of it is below the level of both these seas, and they are only kept out by means of dykes, of the most stupendous construction. These are continued along nearly its whole extent; the interior is traversed by small canals in every direction, and the great North Holland ship canal traverses its whole length. This canal admits vessels of 800 or 1000 tons, being 21 feet in depth, and of a sufficint breadth to permit two to pass each other without difficulty.

My entrance into this sub-marine country was from Amsterdam, itself liable to be submerged at any moment by the derangement of two or three sluices, which regulate the waters of the Harlamer Meer. Amsterdam is separated from North Holland by a river called the Y; this is almost on a level with the town of Saardam, and the houses and windmills, at a distance, seem to rise up from the midst of the waves. Saardam should be called the city of windmills; the number in and about it is stated at 400. I did not attempt to count them, but should be disposed to think it even greater. The effect, when all are in simultaneous motion, is most extraordinary. These mills are not only employed in pumping water and grinding grain, but in producing stones for cement, expressing oil from seeds, grinding paints for colors, &c., &c.

Soon after escaping from among the windmills, we came upon the border of a large polder called the Wurmur. Polder is the Dutch name for a piece of reclaimed land, occupying the place of a former lake. The first step in making a polder, is to surround the lake with a broad double dyke or canal, with very firm embankments; this canal discharges the water at the nearest practicable point, and also serves to convey the produce of the polder to a market. When it is complete, they erect one or more windmills, according to the size of the polder, and commence pumping. The Archimedean screw, is, I believe, almost universally employed at present. When the water is sunk to such a level that the first mill can no longer reach it, a second is placed, and a small canal formed, conveying the water which it raises, to the first. In this way, the water in some very deep polders is lifted four or five times. When the bed of the lake is laid, dry roads are run across it, at right angles to each other, and square farms, divided up by ditches, are laid out. There are large central ditches which convey the water to the spot where it is to be pumped up by the windmills, and from some low parts the water is discharged into these by small auxiliary mills, there being thus a polder within a polder. In the summer, the mills have ordinarily not much work to do, but in the spring and autumn they are often taxed to their full power. In large draining operations now going on, such as the Haarlemer Meer, they are employing steam to do the pumping, instead of wind, as being more to be depended upon, and also more economical.

When the bed of the lake is thus laid dry, the next step is to lay it out in farms. These are rather large ordinarily, and are square except where they reach to the outer edge of the dyke. One or two large highways run through the middle, and at the corner of each farm stands a farm-house, in most respects resembling its neighbors. Nearly all are square, and built of bricks, with low whitewashed walls, not more than six or eight feet in height, and without windows; some little holes admit a glimmering of light, but it must be very faint. I believe that this portion of the house is used for the sleeping rooms of servants, and as a granary. The lower parts of these houses are sometimes painted with a stripe of black and then of white, and the trees ornamented to the same height with the same colors.

Every farm is surrounded by its ditch, and often has two or three running through its centre. There are no fences, but gates at the bridges keep the cattle confined within their proper fields.

An account of the remainder of this excursion I must defer until another opportunity.

John P. Norton.

YOUATT'S WORK ON THE PIG.

We gave a brief notice of this work last month, but had not then space for any portion of its contents. The author begins by giving the natural history of the pig, next shows the origin of our domestic races, with useful and interesting observations on their respective characteristics.

"The Hog, (*Suidae Sus* of the ancients and Linnæus,) according to Cuvier, belongs to the class Mammalia, order Pachydermata, genus Suidae or Sus, having on each foot two large principal toes, shod with stout hoofs, and two lateral toes much shorter and scarcely touching the earth; the incisors variable in number, the lower incisors all levelled forwards; the canines projected from the mouth and re-curved upwards; the muzzle terminated by a truncated snout, fitted for turning up the ground; the stomach but little divided; the body square and thick, and more or less covered with bristles and hairs; the neck strong and muscular; the legs short and stout." All this species feed on plants, and especially on roots, which their snout or trunk enables them to grub out of the earth; they will devour animal substances, but rarely hunt or destroy animals for the purpose of devouring them. They are thick-skinned; said to be obtuse in most of their faculties, excepting in the olfactory and oral senses; voracious; bold in defending themselves; and delight in humid and shady places.

To this order belong the elephant, the rhinoceros, the hippopotamus, &c., the general characteristics of all of which are very similar.

Under the generic term Suidae or Sus, many zoologists have included, besides the true hog as it exists in a wild or tame state in Europe, Asia, and Africa, the peccary, the babiroussa, the phaco-choere, and the capibara.[*]

Use of Swine's Flesh.—In regard to the use of swine's flesh by the ancients, it is observed:—

"As far back as the records of history enable us to go, the hog appears to have been known, and his flesh made use of as food. 1491 years before Christ, Moses gave those laws to the Israelites which have occasioned so much discussion, and given rise to the many opinions which we shall presently have to speak of; and it is quite evident that had not pork then been the prevailing food of that nation, such stringent commandments and prohibitions would not have been necessary. The various allusions to this kind of meat, which occur again and again in the writings of the old Greek authors, plainly testify the esteem in which it was held among the nation, and it appears that the Romans actually made the art of breeding, rearing, and fattening pigs, a study, which they designated *Porculatio*. Every art was put in practice to impart a finer and more delicate flavor to the flesh: the poor animals were fed, and crammed, and tortured to death in various ways, many of them too horrible to be described, in order to gratify the epicurism and gluttony of this people. Pliny informs us that they fed swine on dried figs, and drenched them to repletion with honeyed wine, in order to produce a diseased and monstrous-sized liver. The *Porcus Trojanus*, so called in allusion to the Trojan horse, was a very celebrated dish, and one that eventually became so extravagantly expensive that a sumptuary law was passed respecting it. This dish consisted in a whole hog, with the entrails drawn out, and the inside stuffed with thrushes, larks, beccaficoes, oysters, nightingales, and delicacies of every kind, and the whole bathed in wine and rich gravies. Another great dish was the hog served whole, the one side roasted and the other boiled."

Prohibition of Swine's Flesh.—In regard to the prohibition against the use of pork by Moses, Mr.

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[*] Mr. Youatt states, however, that there are such material differences between the peccary and the common hog, that they should not be reckoned in the same genus.

THE WILD BOAR.—Fig. 88.

Youatt observes that there have been numerous theories advanced. One writer supposes the law prohibited swine because of their extreme filthiness, and he observes that it is well known with what care and precision the law forbids all filthiness and dirt, even in the fields and in the camp, not to mention in the cities. Now, had swine been permitted, the public places, and streets, and houses, would have been made nuisances."

"Tacitus," says Mr. Youatt, "states that the Jews abstained from it in consequence of a leprosy, by which they had formerly severely suffered, and to which the hog is very subject. And several other writers concur in this view, stating that it was on account of the flesh being strong, oleaginous, difficult of digestion, and liable to produce cutaneous diseases, that it was forbidden. Michaelis observes, that throughout the whole climate under which Palestine is situated, leprosy is an epidemic disease, and the Israelites being overrun with it at the period of their quitting Egypt, Moses found it necessary to enact a variety of laws respecting it, and the prohibiting the use of swine was one of these."

Notwithstanding the apparent detestation with which the Jews regarded swine, Mr. Y. observes that it is well known they reared immense numbers of these animals, "probably for the purpose of gain, and in order to supply strangers and the neighboring idolaters."

Natural Instincts of the Pig.—Mr. Youatt vindicates the pig against the charge of stupidity, filthiness, and intractability.

"It has been too much the custom to regard the hog as a stupid, brutal, rapacious, and filthy animal, grovelling and disgusting in all his habits; intractable and obstinate in temper. But may not much of these evil qualities be attributable to the life he leads? In a native state, swine seem by no means destitute of natural affections; they are gregarious, assemble together in defence of each other, herd together for warmth, and appear to have feelings in common; no mother is more tender of her young than the sow, or more resolute in their defence. Besides, neglected as this animal has ever been by authors, there are not wanting records of many anecdotes, illustrative of their sagacity, tractability, and susceptibility of affection. How often among the peasantry, where the pig is, in a manner of speaking, one of the family, may this animal be seen following his master from place to place, and grunting his recognition of his protectors."

The most remarkable case of intelligence and tractability in swine, of which we have heard, is that of a sow trained to hunt, an account of which is given in the following extract from *Daniel's Rural Sports*:

"Toomer, (formerly one of the king's keepers in the New Forest, and afterwards gamekeeper to Sir Henry Mildmay,) actually broke a *black sow* to find game, and to back and stand. Slut was bred in, and was of that sort which maintain themselves in the New Forest without regular feeding, except when they have young, and then but for a few weeks, and was given, when about three months old, to be a breeding sow, by Mr. Thomas to Mr. Richard Toomer, both at that time keepers in the forest. From having no young she was not fed or taken much notice of, and, until about eighteen months old, was seldom observed near the lodge, but chanced to be seen one day when Mr. Edward Toomer was there. The brothers were concerned together in breaking pointers and setters, some of their own breeding, and others sent to be broke by different gentlemen: of the latter, although they would stand and back, many were so indifferent that they would neither hunt, nor express any satisfaction when birds were killed and put before them. The slackness of these dogs first suggested the idea that, by the same method, any other animal might be made to stand, and do as well as any of those huntless and inactive pointers. At this instant the sow passed by, and was remarked as being very handsome. R. Toomer threw her a piece or two of oatmeal roll, for which she appeared grateful, and approached very near; from that time they were determined to make a *sporting pig* of her. The first step was to give her a name, and that of Slut, (given in consequence of soiling herself in a bog,) she acknowledged in the course of the day, and never afterwards forgot. Within a fortnight she would find and point partridges or rabbits, and her training was much forwarded by the abundance of both which were near the lodge; she daily improved, and in a few weeks would retrieve birds that had run as well as the best pointer, nay, her nose was superior to the best pointer they ever possessed, and no two men in England had better. She hunted principally on the moors and heaths. Slut has stood partridges, black-game, pheasants, snipes, and rabbits, in the same day, but was never known to point a hare. She was seldom taken by choice more than a mile or two from the lodge, but has frequently joined them when out with their pointers, and continued with them several hours.

She has sometimes stood a jack-snipe when all the pointers had passed by it; she would back the dogs when they pointed, but the dogs refused to back her until spoke to, their dogs being all trained to make a general halt when the word was given, whether any dog pointed or not, so that she has been frequently standing in the midst of a field of pointers. In consequence of the dogs not liking to hunt when she was with them, (for they dropped their sterns and showed symptoms of jealousy,) she did not very often accompany them, except for the novelty, or when she accidentally joined them in the forest. Her pace was mostly a trot, was seldom known to gallop except when called to go out shooting; she would then come home off the forest at full stretch, for she was never shut up but to prevent her being out of the sound of the call or whistle when a party of gentlemen had appointed to see her out the next day, and which call she obeyed as regularly as a dog, and was as much elevated as a dog upon being shown the gun. She always expressed great pleasure when game, either dead or alive was placed before her. She has frequently stood a single partridge at forty yards' distance, her nose in an exact line, and would continue in that position until the game moved: if it took wing she would come up to the place and put her nose down two or three times; but if a bird ran off, she would get up and go to the place, and draw slowly after it, and when the bird stopped she would stand it as before. The two Mr. Toomers lived about seven miles apart, at Rhinefield and Broomey lodges; Slut has many times gone by herself from one lodge to the other, as if to court the being taken out shooting. She was about five years old when her master died, and at the auction of his pointers, &c., was bought in at ten guineas. Sir Henry Mildmay having expressed a wish to have her, she was sent to Dogmersfield Park, where she remained some years. She was last in the possession of Col. Sykes, and was then ten years old, and had become fat and slothful, but could point game as well as ever. She was not often used, except to show her to strangers, as the pointers refused to act when out with her. When killed she weighed 700 lbs. Her death-warrant was signed in consequence of her having been accused of being instrumental to the disappearance of sundry missing lambs."

Instances are given of hogs having been trained to work in harness, and to draw carriages; and an eccentric old gentleman near St. Albans, is said to have had, about thirty years ago, a team of four of these bristly steeds, which he used to drive at a brisk trot round the country, harnessed to a chaise-cart. And in the island of Minorca, it is said that the ass and hog may to this day be regularly seen working together turning up the land.

The **Wild Boar**, fig. 60, is regarded as the parent of our domesticated breeds. That he is so, there can be no doubt. "The well known fact," says Mr. Youatt, "that all kinds breed with the [wild] boar, is in itself a sufficient testimony; but to this we can add that the period of gestation is the same in the wild and tame sow; the anatomical structure is identical; the general form bears the same character, and the habits, so far as they are not altered by domestication, are the same.

"This animal is generally of a dark brown or iron-gray color, inclining to black, and diversified with black spots or streaks. The body is covered with coarse hairs, intermingled with a downy wool; these become bristles as they approach the neck and shoulders, and are here so long as to form a species of mane, which the animal erects when irritated. The head is short, the forehead broad and flat, the ears short, rounded at the tips, and inclined towards the neck, the jaws armed with sharp, crooked tusks which curve slightly upwards, and are capable of inflicting fearful wounds, the eye full, the neck thick and muscular, the shoulders high, the loins broad, the tail stiff, and finished off with a tuft of bristles at the tip, the haunch well turned, and the legs strong. He is a very active and powerful animal, and becomes fiercer as he grows older. He is neither a solitary nor gregarious animal. For the first two or three years, the whole herd follow the sow, and all unite in defence against their enemies, calling upon each other with loud cries in case of emergency, and forming in regular line of battle, the weaker occupying the rear. But when arrived at maturity, the animals wander alone, as if in perfect consciousness of their strength, and appear as if they neither sought nor avoided any living creature. He is said to live about thirty years. He formerly inhabited the forests and wilds of all quarters of the old continent; but of late years is confined to the most uncultivated portions."

A notice of "Domestic Breeds," with illustrations, will appear next month.

Drawing off Corn.—Many farmers wish to sow wheat after corn. Good crops are often thus raised, if the corn has been well manured, and a small early variety planted. A very unfarmerlike operation is to leave the shocks of corn in rows, and plow and sow between. Solon Robinson describes the Jersey mode of drawing it off, in the Prairie Farmer, which he likes "best of all modes."—"The corn being put into large shocks in the field, is hauled one at a time in a horse cart, in this wise. A light frame is made to take the place of the cart bed, having two long stakes behind, so that one is on each side of the shock when the cart is backed up, and the frame tipped back as though dumping a load. A small rope is now thrown over the shock, and this being attached to a small windlass on the thills and running through the forward part of the frame, on being wound up draws the shock tight to the frame, and then draws the frame down where it is held fast, the butts of the shock hanging off behind. When arrived at the place to unload, the rope being let loose, down goes the shock, standing just as it did in the field. Where the distance is not over a mile, it is astonishing how soon a field may be cleared."

Cutting Wheat Early.—H. B. Hawley says in the Prairie Farmer, "As soon as the bulk of the crop has got its brown color, and the berry is doughy and soft, I commence cutting, and let lie in the swath one day if the weather is good, and do not wait for the small wheat to grow larger, for it never will. I let three acres of my best wheat stand until dead ripe, for seed; it weighed 61 lbs.; the weight, alongside, cut one week earlier, was 64 lbs." The result of this experiment accords entirely with the same elsewhere. Wheat cut early affords more grain, yields less bran, makes better flour, shells less in harvesting, wastes less in gleanings, gives better straw, and enables the farmer to do the work more leisurely.

Age of Goats.—Goats appear to attain a greater age than sheep. When Alexander Selkirk was on the Island of Juan Fernandez, he caught above 500 goats, which he marked on the ear and let them go. In Commodore Anson's *voyage*, it is mentioned that the Centurion's men found on the island several venerable goats, which, from having their ears slit, they concluded had been caught by Selkirk, who was left on the island about thirty-two years previous.—[*J. H. Fennell in the Scottish Quarterly Journal of Agriculture.*]

THE ORCHARD AND THE GARDEN.

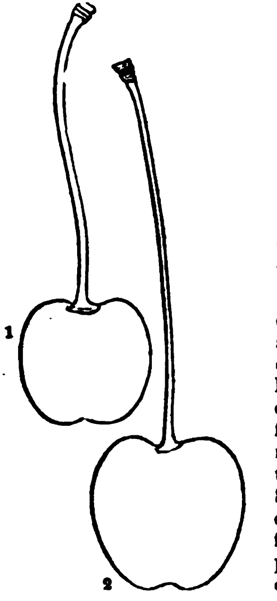
FINE CHERRIES.

THE cherry, from its hardiness, freedom from disease, great productiveness, and early maturity, is unquestionably one of the most desirable and valuable fruits. It is true, that those who have never seen the finer varieties in full perfection, will not esteem it; but fine rich, juicy, and delicious specimens of such sorts as Knight's Early Black, Downton, and Florence, will command a respect with such contemners, beyond the power of any argument.

Another reason that the cherry is underrated is, it is usually eaten before ripe. Winter apples have long since disappeared, or become flavorless, and at the first reddening of the thickly loaded branches, the new fruit is snatched from the tree, and eaten with all the avidity which the long fast has occasioned. The May-duke, when fully ripe, is black, with deep blackish crimson juice; yet many who have repeatedly eaten it, suppose it to be only a dark-red cherry. A cultivator of good fruit, after trying a new cherry for successive years, denounced it as worthless; but at length a few, hidden by leaves, escaped his search till fully ripe, when they were found to be of the most delicious quality, and the character of the nurseryman who furnished them, was, by a bare accident, retrieved. All varieties of *high flavor*, are greatly improved by a very thorough ripening.

Modern horticulture has brought to light many fine varieties, yet a careful selection of a few will afford nearly all that is desirable of this very early and delicious fruit. The following will be mostly unknown to a large number of our readers, and may assist in directing the attention to the culture of the finer sorts.

MAY BIGARREAU. (*Bigarreau de Mai, or Beauman's May.*)—One of the earliest of all known cherries, and though of second size and quality, eminently valuable for its productiveness and period of maturity. In central and western New-York, it begins to ripen about the first of 6 mo., (June.) It has sold the present season in the Rochester market for six dollars per bushel. It is a profuse bearer.

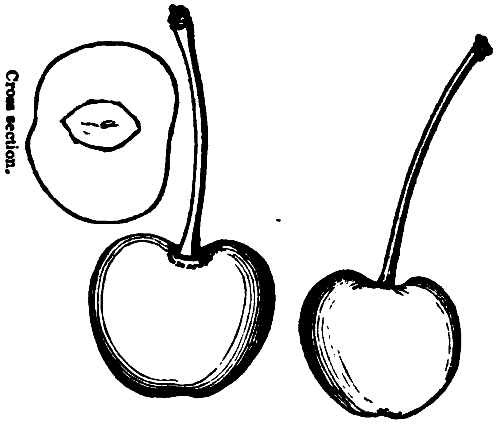


1. *May Bigarreau.*
2. *Early Purple Guigne.*

Fruit medium in size or rather small; good-sized specimens 11-16ths of an inch long, and nearly 12-16ths wide, round-ovate heart-shaped; before fully ripe, a prominent angle extends from the stem downwards. Skin dark reddish-black, or very nearly black when fully ripe; nearly always picked too soon, or when only dark red, and smaller, less plump, and more angular. Stalk one and a half to one and three-quarters of an inch long, set in a distinct narrow cavity. Flesh blackish red, of a mild, good, second-rate flavor. The branches on the young trees are nearly horizontal, slightly curved downward, and somewhat flexuous; the tree of free and vigorous growth.

EARLY PURPLE GUIGNE.—Fruit of full medium size, ovate heart-shaped, a little irregular in form, an obtuse rib from the stem running down on one side. Stalk about two and a quarter inches long, slender, set in a narrow distinct cavity, which is considerably ribbed before maturity. Color, when beginning to ripen, very distinctly and conspicuously dotted with purple, but finally becoming, when at full maturity, a fine dark or blackish crimson. Flesh dark red, tender, with a sweet, mild, and good flavor. Stone rather large. Growth of the tree peculiar—many of the smaller branches assuming rather a drooping position, and the petioles of the leaves being longer and more slender than those of most other sorts.

The May Bigarreau and Early Purple Guigne, ripen at about the same time, or at least two weeks earlier than the Black Tartarian; and being at a period when none others have yet appeared, the flavor is usually regarded as quite delicious and of first quality.


Cross section.

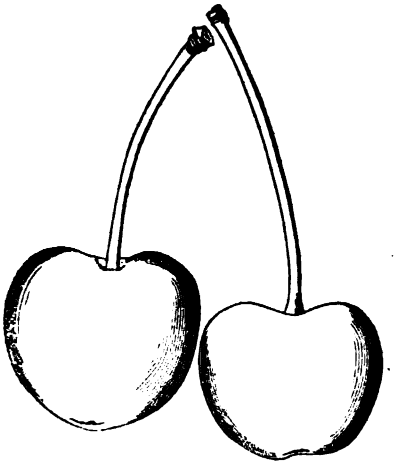
Knight's Early Black. *Madison.*

KNIGHT'S EARLY BLACK.—Fruit large, obtuse heart shaped, a little wavy or irregular in outline, but less so than Black Tartarian. Stalk rather stout, an inch and a half long, set in a narrow deep cavity. Skin nearly black, flesh blackish crimson, very tender, juicy, of a sweet and excellent flavor, less insipid than Black Tartarian, and decidedly its superior. It ripens early, or a little before the latter.

Knight's Early Black considerably resembles the Black Eagle, but is earlier, a very little larger, the stem more deeply set, and while the leaf of the latter is quite smooth below, that of the former is considerably downy in the axils of the midrib. The growth of the branches of Knight's Early Black is often quite horizontal, more so than in the Black Eagle. These two are evidently the finest flavored of black cherries.

DOWNTON.—Large, blunt heart-shaped, roundish. Stalk one and three-quarters to two inches long, set in a rather narrow hollow. Surface a little wavy, light yellow, intermixed with light red, in dots and shades. Flesh yellowish white, tender, delicate, of a sweet, rich, and fine flavor.

The Downton somewhat resembles at first glance, in the fruit and growth of the tree, the Yellow Spanish,



Napoleon Bigarreau. *Downton.*

but has a longer and more slender stem, set in a narrower cavity, and a more wavy surface; while it is a little smaller, tenderer, and of decidedly superior flavor. Taken altogether, it is not probably excelled by any cherry, and equalled by very few.

Napoleon Bigarreau.—Very large, regular heart-shaped, often inclining a little to oblong. Color whiteish yellow in the shade, dotted, spotted, and somewhat blotched with light red; deep red next the sun. Flesh very firm, with a good, but not high flavor. Stalk rather stout, very short, about an inch and a quarter long, set in a narrow and rather deep cavity.

Although not of very high flavor, and of too firm a flesh, yet, from its great size, beauty, and productiveness, it is eminently fitted for a market fruit, having been sold the present season more readily for five dollars per bushel, than smaller and better cherries for three dollars per bushel.

In addition to the above, every collection of much extent should comprise the following:—

Madison Bigarreau—an early, moderate sized, light-red cherry, tender, juicy, and of fine flavor.

Black Tartarian—well known for its fine growth, great size, and remarkable productiveness.

Elton—a large, long heart-shaped, light-red cherry, of high, fine flavor, and a great bearer.

Yellow Spanish—well known for its great size and beauty, though hardly equal to some sorts in flavor.

Large White Bigarreau—a large, long heart-shaped, light-colored cherry, scarcely equalled in its fine texture and delicious flavor, but a moderate bearer; and sometimes rotting after rain.

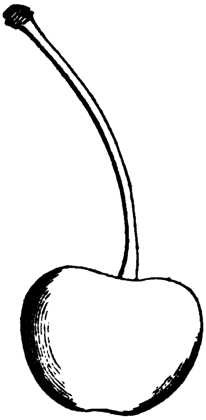
American Heart—rather large, oblong, blunt heart-shaped, light red or pink, flesh soft and tender, somewhat pulpy, of a fine flavor.

Belle de Choisy—a very handsome round cherry, of medium size, mottled with red on a light ground; very sweet for a cherry of the Duke class; regarded by some as too watery and insipid, but greatly valued by others for its juciness, delicacy, and delicious flavor.

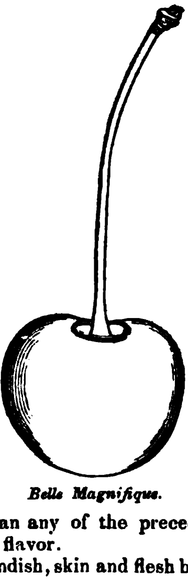
Downer's Late Red.—Size medium, very regular round heart-shaped, of a full red color. Hardly equalled for its high rich flavor, *when ripe;* but like all high flavored cherries, a little bitter if eaten immature; also valuable for ripening after most other sorts have disappeared.

Florence—a very fine late cherry,—large, round heart-shaped—much resembling, externally, the Yellow Spanish, but shorter, later, rather softer, and superior in flavor.

Carnation—a large, handsome, yellowish red, marbled cherry, ripening later than any of the preceding, and valuable for its rich high flavor.



Florence.



Belle Magnifique.

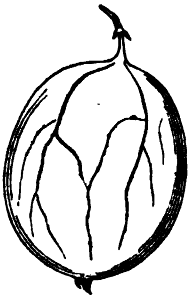
Gridley—medium size, roundish, skin and flesh blackish crimson, possessing a little of the high-flavored astringency of the Morello, before fully ripe. Valuable for its fine high flavor, and for its extraordinary productiveness, ripening soon after the Yellow Spanish. Fine for market.

Sparhawk's Honey—a very valuable, rather late sort, of medium size, light red, very smooth and regular in form, of a tender, juicy, fine-flavored flesh, and profuse bearer.

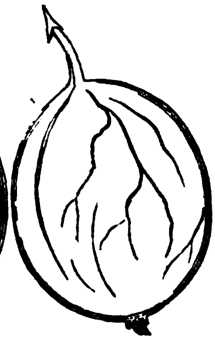
Belle Magnifique—is a cherry of the largest size, round, inclining slightly to heart-shape, of a fine rich red, belonging to the Duke class, but not so rich as the Mayduke, nor so high-flavored as the Carnation—ripening with the latter—a moderate bearer.

Elkhorn, or *Tradescant's Black Heart*, is a large, heart-shaped, blackish crimson or black fruit, with a wavy surface, with a solid and firm flesh, of a slightly bitter but very high flavor—when very thoroughly ripened, excellent. Rather late. T.

Note.—The figures are drawn from specimens of *average* size, under good culture.



White Smith.



Waterloo.

THE GOOSEBERRY.

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Perhaps there is no fruit which is less known among cultivators generally, than the gooseberry. Every one has seen gooseberry *bushes;* but very few, any other than poor and small fruit, or worthless larger varieties covered with mildew. At the same time, there is scarcely any fruit, if of proper varieties, more worthy, in some respects, of universal cultivation, where climate will admit. The bushes occupy very little space in a garden, and come into bearing beautifully a year or two after transplanting.

All of the most northern portions of the United States seem well adapted to the gooseberry. Many of the large English sorts are very liable to mildew here; those of medium size usually do better. One of the best means to prevent mildew, is good mellow cultivation on a deep rich soil, accompanied with good pruning every autumn. A correspondent of the Horticulturist, in New Jersey, ascribes his uniformly good success, and their freedom from mildew, to a top-dressing of three inches of salt hay. This, though doubtless very beneficial, would not probably succeed without the best cultivation besides. With a selection of such varieties as by trial, have been found to be free from it, and the preceding precautions, little trouble from this source need be feared.

Many hundred varieties have been produced by the English cultivators, but so nearly alike in size and flavor are many of them, that half a dozen well selected sorts, would embrace essentially all that would in ordinary cases be required. We have placed at the head of this article accurate outlines of two esteemed varieties, grown on bushes with ordinary culture, with moderate pruning, and with the fruit not at all thinned on the branches. Indeed, so productive are these and some other sorts, that fruit, of the size represented, often lines the lower sides of the branches, so thickly as to be in actual contact for several inches together. The figures given above are precisely of the natural size and shape, being accurately traced by their shadows. T.

SELECT VARIETIES OF STRAWBERRIES.

Preliminary to a full exposition of the relative merits of the different varieties of the strawberry, I will now, as some guidance to those who are desirous of forming plantations, name such varieties as the full experience of years has proved should be *summarily rejected*, and also some that may be pre-eminently adopted for their *certainty of crops*. The great improvements made in the character of this fruit, have now rendered it necessary that many of the older varieties, which have been hitherto held in esteem for want of better, and which, although in most cases possessing good flavor, are miserably unproductive, should give place to those which produce abundant crops, and possess other estimable properties.

As a general rule, the English varieties, which have been from time to time so much vaunted, are not at all comparable to the new American varieties, or even to those found in a natural state in our woods and prairies; and with but few exceptions they are destined to be banished from our gardens; and will, no doubt, be displaced, even in England, by the superior varieties which will be sent from America. I have affixed an S. to the staminate, and P. to the pistillate varieties. Wm. R. Prince.

Soil.—The soil should be stiff and not sandy, and should be dug and pulverized to the depth of 18 inches; it cannot be made too rich, and old rotten manure should be plentifully intermixed throughout the whole depth.

REJECTED VARIETIES,

All of which are staminate, with more or less fertile pistils.

British Queen, worthless for barrenness.
Black Musk Hautbois, do.
New Black Musk " do.
Corse's Seedling, do.
Downton, do.
Elton, do.
Myatt's Eliza, worthless for barrenness.
——— Pine, do.
Old Pine, do.
Royal Scarlet, do.
Southborough, do.
Deptford Pine, foliage burns up in summer.
Roseberry or Aberdeen, small, poor crop.
Keene's Seedling, }
Ross' Phœnix, } medium size, and half crop.
Garnestone Scarlet, fine flavor, poor crop.
Duke of Kent's Scarlet, prolific, insignificant, useless.

Bishop's Orange, the dark red variety so called is erroneous; the true is Orange Scarlet, very productive and valuable.

Common English Hautbois.
Faulkner's Scarlet Pine.
Nairn's Scarlet.

TWENTY ESTIMABLE VARIETIES.

Large Early Scarlet, S., prolific.

Alice Maude, S., very large, fair crop, early.

Primordian, P., amazingly productive, large, beautiful bright scarlet, the most valuable early variety.

Abysinian Prince, P., large, very dark, productive.

Black Prince, P., " " "

Bishop's Seedling, P., medium, orange scarlet, very productive.

Boston Pine, S., large, fair crop in rich soils.

Buist's Prize, S., very large, showy, fair crop.

Crimson Cone, P., exceedingly productive, large, beautiful color.

Crimson Pine, S. & P., large, fine flavor, very productive.

Eberlin, P., large, productive

Hovey's Seedling, P., very large, very productive.

Hudson, S. & P., large, very productive.

Iowa, S., orange scarlet, large, productive.

Lizzie Randolph, P., same size, and more productive than Hovey's Seedling.

Necked Pine, P., scarlet, large, remarkably productive, peculiar form.

Primate, S., very large, deep scarlet, splendid, very productive.

Prince Albert, S., very large, beautiful, fair crop, requires rich soil.

Taylor's Seedling, P., long oval, scarlet, very productive.

Unique, S., large, very oblong, light scarlet, excellent, productive.

Mr. Burr's five Ohio varieties, have fruited with me, and promise well; three of them are pistillate varieties.

SELECT LISTS OF APPLES.

Different cultivators, having equal acquaintance with different varieties, will not agree in selection; there are a few sorts, however, which all will agree in pronouncing fine. Such sorts, may, therefore, be more confidently recommended to the novice, than those about which good cultivators will differ. A man who knows well a hundred different kinds, of reputation, by selecting a very few, will hardly fail to get such only as are truly valuable.

B. V. **French**, one of the most eminent cultivators of the apple in New England, gave the following as the six best apples, for early, medium, and late or winter ripening:—

Early Harvest,
Porter,
Famense,
Rhode Island Greening,
White Seeknofarther,
Baldwin.

Another eminent New England cultivator, gave for the three best apples, summer, autumn, and winter, the following:—

Williams' Red, Porter, Baldwin.

Another gave—

Early Harvest, Porter, Baldwin.

Stephen H. Smith, of Rhode Island, who has grown and tested a hundred and fifty kinds, says that all the winter apples raised in New England, are not worth as much as the three kinds named in the following list, given by him in the *Horticulturist:*

1. *Rhode Island Greening:* first for health of tree, bearing, keeping, and cooking.
2. *Baldwin:* good for bearing, table, and keeping.
3. *Roxbury Russet:* good for bearing and keeping.

A. J. Downing gives the following select list of thirteen hardy apples:—

Early Harvest,
American Sum. Pearmain,
Large Yellow Bough,
Red Astrachan,
Summer Queen,
Fall Pippin,
Jersey Sweeting,
Porter,
Baldwin,
English Russet,
Roxbury Russet,
Rhode Island Greening,
Yellow Bellflower.

It will be observed that the last list embraces all in the preceding lists, except Williams' Red, White Seeknofarther, and Fameuse. These added would give sixteen fine varieties. T.

REMEDY FOR SLUGS ON CHERRY TREES.

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Editors of the Cultivator—Some three or four years ago I observed, for the first time, a small slimy insect upon the leaves of the cherry tree, which made sad havoc of the leaves, and materially injured the quality of the fruit. They grow to the length of one-third of an inch, and at first view look much like the common pollywag, but are provided with some twelve pairs of stumps, which enables them to travel over the surface of the leaf, and very little more—one among the millions of examples which go to show the beautiful fitness and adaptation of organs to the necessities of the animal. They make their appearance in June, and continue their stay till August. Their appearance is extremely disgusting, especially when they take up their residence on the fruit. They eat out the parinchyma of the leaf, and from their vast numbers, often five to six on a leaf, in a little time the tree looks as if it had been burnt over.

So far as I can learn, they are a new creation. I have taken some pains to ascertain the routine of their existence, but as yet with little success. A short time before they made their appearance I observed millions of small white flies or millers, buzzing through the tops of the trees. These disappeared after two or three days, and in a week or ten days I found the leaves swarming with these insects.

The object of this communication is to present to all who may be interested, a remedy, easily applied and infallible in its operation. This year my cherry trees blossomed profusely, and I determined to preserve the fruit if possible. After the insects made their appearance, I sifted dry slaked lime over the leaves, and from the *moist, slimy* constitution of the insect, every particle of lime adhered to them that came in contact with them. The consequence was they soon gave indications of distress, rolled up and fell to the ground. They are almost always found upon the top of the leaf, rendering it very easy to reach them; and I believe they generally die, even from the effects of a minute quantity of the lime. I applied lime twice only to my trees; and although a few insects escaped, yet I have a fine crop of cherries, and my trees have a good covering of healthy leaves. Had I left my trees to their fate, probably every leaf would have fallen off, and left a small, half-perfected berry upon the otherwise naked branches. Samuel Guthrie.

Sacketts Harbor, July 20, 1847.

P. S. Since writing the above, a neighbor who has a good number of cherry trees, informs me that his trees are dead and dying—that the slugs, as they are called here, have left scarcely a live leaf upon them, whilst the fruit is stinted, sour, and worthless Although I sifted lime but twice to save my fruit, yet it is obvious that it should be done so often as may be necessary. With a small ladder, set up on the windward side of the tree, and three or four quarts of dry lime, any one may in a few minutes save both the tree and its fruit.

THE CURCULIO.

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Some time ago, a remedy was proposed in the Ohio Cultivator, on the authority of Gen. J. T. Worthington, consisting of tubs, whitewashed inside, and containing an inch of water, placed under the trees in the night, with a lighted candle in each. The light attracts them, and it was stated that "*hundreds* had been caught in this way, in *one night* in a *single tub*," and that it had been practised with much success by "one or more" fruit growers of Chillicothe. In a subsequent number of that paper, I. Dille, an intelligent nurseryman, states that he has tried this remedy without any success whatever; that some of these insects were under water half an hour, without any apparent inconvenience; and that they ascended the side of the tub "as readily as a sailor would a rope."

A. J. Downing recommended in the Horticulturist, throwing up the ground late in autumn in trenches and ridges, for the purpose of freezing them, and stated that a correspondent had found it quite successful. The writer tried this same way last autumn, but this year they were thicker than ever. On one little tree of the Italian Damask plum, not seven feet high, thus treated, eighteen curculios were found at a single shaking.

Jarring down on white sheets, assisted by the labors of pigs in devouring the stung fruit, appears to be the only well known and effectual remedy. David Thomas, of Cayuga Co., N. Y., who first put in practice this remedy nearly thirty years ago, and who has continued it ever since, has saved fine crops of plums and apricots the past and present season, although these seasons have proved remarkable for the abundance of these depredators. Last year he destroyed on the spread sheets over 1,700, and the present year over 2,100 curculios. T.

Poisonous Parts of the Pie Plant.—The London Gardeners' Chronicle states cases of severe illness being produced by using the swelling *buds* of the pie plant for tarts. Several cases are also mentioned where severe or dangerous illness has resulted from the use of the leaves as spinach. We have known a similar case in this country. Oxalic acid in the leaves may be the cause. Hence caution should be used not to employ any part of this plant as food, except that which experience has proved harmless.

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Asparagus.—A correspondent of the Farmer and Mechanic, raised asparagus very successfully as follows:—"I selected a warm, sunny spot; and mixed in freely, sand and coarse manure, saturating it with brine to the depth of two feet. On the top I put three inches of fine loam and vegetable mould; planting my seeds after steeping them in warm water 24 hours, the seeds about 8 inches apart, and the rows one foot." Every autumn fine manure is mixed with the surface soil, and a coat of coarse manure protects the whole through winter. Two quarts of salt on a bed 5 feet by 30, are sprinkled every spring, and water freely applied every evening in dry weather.

THE FARMER'S NOTE BOOK

"Irish Rose Butter."—A notice was published in the Cultivator for July, as to "Irish Rose Butter," said to be the article which the government required to be conformed to in contracts for supplying the navy. I have lately received letters from England and Ireland in relation to this Irish butter, and the result is, that so far as I can learn, there is no such butter manufactured in Ireland for their shipping, as "*Rose Butter*."

A letter from Clonmel, Ireland, says, "We never heard of *rose butter*,—but we know one of the Waterford houses brands the best quality he ships with a rose."

Another letter says, "He understands that there is *rose butter* which is put up with *very little salt*, and is nearly as good as fresh butter; *but it is not fit for export*."

Another letter from Cork, from which port the butter for the British navy is purchased. being made in the counties of Cork, Limerick, and Kerry, says, "The term "rose butter" we know not the derivation of. There is only one description shipped here, and all is brought in for inspection to a public market in this city."

The letter from Cork gives the method of manufacturing butter for the British navy, which I will give for the benefit of your readers, trusting that it will be useful to our dairymen, and may perhaps enable some of them to compete for the supply of the navy, with the *one* county referred to by your correspondents. The writers say—

"The butter brought here, is packed by the farmer in original packages, which should be good casks of about 66 to 70 lbs. nett each, capable of containing pickle, (the pickelleries and cooperage, with some 1 or 2 lbs. of the salt on each package additional, to keep the pickle at full strength,) should be done at the port of exportation, as it is here. The quantity of salt mixed in the making of the butter, to be about 1 lb. of salt to 10 or 11 lbs. of butter, and the buttermilk to be well worked out of the butter, without using, however, the hand too much. In packing, care should be taken to pack it as closely as possible. This, we believe, is the only instruction that can be given." H.

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See those Young Maples.—The present year has been peculiar for the immense quantities of young maples that have sprung up everywhere in the region of these valuable trees. In our highways, where maples have been planted as ornamental trees, they have sprung up on either side of the travel path, as thick as though they had been sown broadcast by some liberal hand. In fields, where perhaps a solitary tree had been left for shade, they have grown for a wide distance around. But in the woodlands their vegetation has been most fortunate in laying the foundation for new forests of these valuable trees. Here, surrounding trees will shelter them from winds and storms, and shield them from scorching suns, and their growth may well be anticipated as rapid and healthful. Such woodlands, however, should be protected from the depredations of cattle and sheep, or this bountiful provision for future necessity will be unavailing. Where proper protection is given, they will give a rapid growth, and in some fifteen or twenty years they will be ready for the sugar manufacturer, or for the axe.

We have heard of one instance where they came up so thick in an old pasture, that the owner has devoted it to their use, and excluded all ruminants from the enclosure. This will probably prove a judicious arrangement to him, and afford an illustration to others of the utility of letting old exhausted fields go to woodlands, even though the labor of seeding them down to such varieties as may be desirable must be necessary. W. Bacon. *Richmond, Mass.*, 1847.

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Cultivation of Potatoes.—The information gained from one number of your valuable paper, in regard to planting Irish potatoes, has more than compensated me for the subscription price for five years. For the benefit of others, who may wish to plant light sandy land, being the kind I have succeeded so well with, I would thank you to again notice and call attention to the manner, which was:—Flush up the land well, open a drill deep with the plow, plant the potatoes in the drill, fill up with manure, level the earth over and cover four or five inches with straw. They never require any further attention, except a few weeds may spring up among them, which can be easily drawn out by hand. The same manner would not be advisable in wet or low lands.

There is probably no climate or soil in the union, better adapted to the cultivation of the sweet potato, or where finer crops are raised, than with us. If my crop should prove as well as usual, and you can inform me to whose care at the city of New-York, I can direct a barrel for you, (as there is no direct communication from here to Albany,) you may expect a barrel next fall as a specimen. Edward Hill. *Cedar Point, Carteret Co., N. C.*

[We thank our correspondent for his kind offer. The sweet potatoes may be sent to the care of A. Van Santvoord & Co., New-York.—Eds.]

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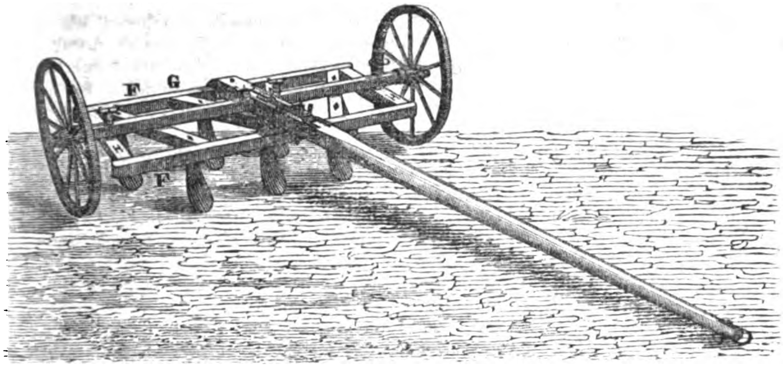
Agricultural Societies—Measuring Land for Premium Crops, &c.—There can hardly be a reasonable doubt in the mind of any one acquainted with the subject, that the formation of agricultural societies and the holding of annual fairs, have been the means of decided benefit to the farming interest. A spirit of improvement and of honorable competition has thus been awakened, whose benefits are not confined to this class of our fellow citizens, but diffusive in a high degree, and extend to all. It cannot be denied, however, that an impression exists, to a considerable extent, that with regard to some of the premium crops, whose yield so much exceeds the ordinary production, and even what are generally considered *great* crops, that some error must obtain, either in the measurement of the land or its product. How much occasion there is for this impression I am unable to say; but I will here allude to a practice which has prevailed to some extent in measuring corn on application for a premium, (a practice which appears to me highly erroneous,) which is, to draw the line *close* to the outside row, and by making the requisite piece long and narrow, the result is obvious. As corn is usually planted, each hill occupies about nine superficial feet; but, if the above method be correct—if it is right to draw the line close on *one* side of the row, why is it not right to do the same on the *other* side, making a connected acre of six inches in breadth, and obtaining a product of perhaps 500 bushels to the acre? The measured crop may *literally stand* on the ground thus marked out, but who can fail to see that it was not *produced* by it? G. Butler. *Clinton, Aug.* 3, 1847.



Ide's Wheel Cultivator and Wire-Grass Plow.—The above cut represents the implement advertised by **Nathan Ide** in the August number of the Cultivator. Its advantages are enumerated as follows:—"1. By means of the wheels, the machine runs easy, and the teeth go to a uniform depth. 2. The teeth are so long that the machine never chokes. 3. The tongue guides the implement with accuracy and precision. And 4. At seed time, by going the last time across the lands, small channels or ducts are formed leading into the main furrows, which effectually take off the surplus moisture, and thus render the wheat less liable to be winter killed." For further particulars see Mr. Ide's advertisement.

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Influence of the Male in Sheep-Breeding.—I am aware that many do not fully realize how highly essential it is that we breed from none but the most perfect of male animals. It is truly astonishing to look about among wool-growers, and see how much indifference, how little discrimination is generally manifested on this point. Many have not that extensive experience, combined with scrutinizing observation, to enable them to make the best selections, provided they have the means, disposition, and an opportunity; others are so destitute of the spirit of improvement, think so much of present labor and expense, that they will not pursue a course that would in the end be productive of the highest benefit. Much of this results from the want of knowledge as to the true comparative value of breeding animals. This value is not to be computed by the present difference in the value of the fleece and carcass; but by the difference in the value of the offspring.

Suppose, for instance, we have a flock of 100 breeding ewes, and are to select bucks from one or two classes, both of which, for constitution, size, and form, are equally good; the one with an ordinary fleece can be obtained for three dollars; the other, with a prime fleece, both alike as it respects quantity and quality, for ten. Which shall we choose? From a knowledge of the properties that constitute the intrinsic value of a sheep, and a knowledge of the male influence upon the offspring, I am satisfied that the progeny of the last named class, will give four ounces of wool more per head, that shall be worth three cents more per pound. Admitting that they shear three pounds and one-fourth of wool, worth forty cents per pound, here would be an improvement of ten cents in the quantity, and about ten in the quality; making twenty cents in the value of each fleece; to this we may safely add twenty cents for the increased value of the sheep for the future production of wool, and one-half of this sum for their increased value for breeding; making an aggregate of 50 cents on each individual offspring, which on 100 would amount to $50, quite a handsome little sum to add to one's annual profits. The statement may seem extravagant to some, but experienced breeders will tell you it is only a moderate estimate, and that too, when the ewes are not above a medium character. I know of flocks where five hundred dollars would be no inducement to the owner to use such bucks as are frequently used by nine-tenths of wool-growers. And notwithstanding all this, I fear there are not a few, who, sooner than pay $5 difference between two bucks, under the above circumstances, would ignorantly sacrifice ten times this amount, honestly believing it the best and most profitable course.

From what I have said, I would not have one infer that I always think the highest priced animals the best or the most profitable. A man's asking or paying a high price, adds nothing to the value. What I have aimed to illustrate, is, that we had much better pay a reasonable price for a good animal, than to use an ordinary one as a gift.

There is, in this vicinity, a brisk demand for wool, at the present time, with an advance in the prices from 6 to 8 cts. from what it was last year at this time. Our wool is in better condition than it has been in former years; people are getting into the practice of wetting their sheep previous to washing, which is found to be a great improvement. Wool, as a general thing, is lighter than usual, which is probably owing in part to its better preparation, and in part to disease, brought on by the maggot-fly, and the long severe winter. I have not as yet weighed any fleeces but yearlings, (May lambs,) which are as follows:

20 yearling ewes, total, 105 lbs. 8 oz., av'g 5 lbs. 4 oz.
100 yearlings, total,... 464 " 5 " " 4 " 10 "

We are beginning to open our eyes to the importance of establishing wool depots. I understand there is much wool sold in this manner in the state of New-York. E. Bridge. *Promfret, Windsor Co., Vt., July* 27, 1847.

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Protracted Gestation in Cows—Inquiry.—A very fine cow has been subject to difficulty in calving—a chief cause appears to be the long period of her going with calf. At the last time an accurate account was kept, and the time was found to be 319 days, or ten months and a half. The longest period I find on record, was reported by Tessier in his Memoir read to thn Academy of Sciences at Paris, in which he states that out of 1131 cows, one extended her time to 321 days, or only two days longer than the case I have just mentioned. The calf was so large that all pronounced it equal in size to a common six weeks calf, and the united strength of four men drawing at ropes, was needed to extract it. The cow is doing well; but will some one who has had experience in such matters, inform me if there is no remedy for this evil for the future, as the cow is one of extraordinary excellence. B. H.

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Seeding to Grass in August.—A new practice has obtained among some farmers in this section, derived first from Mr. Buckminster of the Massachusetts Plowman, of seeding down to grass upon the green sward furrow, in the latter part of August or first of September. When a piece of land becomes "bound out," as the phrase is, or ceases to yield a good swath, it is very carefully and nicely turned over by the plow at this season, and rolled down. Fifteen to twenty loads of fine compost are then spread to the acre and harrowed; first lengthwise the furrow, and then diagonally. The grass seed is then sown and covered with a brush harrow. The new seeding will be fit for the scythe the next season, although a little later than the old fields.

Among the advantages advocated for this practice are the following:—

1st. In those localities where hay commands a high price, the land may be kept highly productive in grass with less manure, than by the system of plowing and planting one or two years, and then seeding with a grain crop.

2nd. It is generally considered that the enriching or vegetable matter in an acre of green sward that will cut three-fourths of a ton of hay, is equal to a dressing of at least fifteen loads of manure. This is turned under, where it is free from the dissipating influence of the sun and wind, and there remains to enrich the land.

3rd. It is well known to the farmer that, by the old practice of planting one or two years and seeding with grain, before he can get round to renovate all the lots, as fast as needed, much of his land in grass will not yield a full crop. By this method, requiring as it does less manure, he can visit his different fields oftener with the plow and manure cart, and thus keep his entire tillage ground in a more productive state.

4th. Almost every farm has some fields in grass too low or wet to be plowed and planted in the spring. These lands can generally be plowed in August, and thus as often as they become bound or overrun with wild grasses, can be turned smoothly over, manured and re-seeded, and a good quality of hay continually obtained. Of course, land to be managed in this way, must be so free from rocks and stumps, that the plow can turn it well.

I have thus given the practice and its recommendations, and although they will not apply in full extent, except in the localities named, still this practice in part, would be useful on most farms, in this region at least. F. Holbrook.

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The Olive in North Carolina.—Being on a visit to Wilmington lately, I fell in with a nurseryman from Paris, with fruit trees, shrubs, and flowers—among others the olive and tea-plant. I am trying an experiment with the former, as I do not think our climate too cold for it. It matures in Europe in more northern latitudes, and I only wonder it has not been long ago introduced and propagated. It affords subsistence to an immense population in the old countries, and in heathenish days was looked upon as almost sacred. I have not the means of gratifying my desire to make improvements of the kind on a large scale, but I do wish that some gentleman blessed with greater advantages than myself, would turn his attention to acclimating both the tea-plant and olive among us. Some have asserted that fruit trees, with the exception of the peach, never do well in our climate, but I think the fault lies with ourselves, and will be found in want of skill and attention. Did we bestow upon them the same labor and same care, and study their nature, as they do at the north, I think we would succeed. But the fact is, we have so many avocations, so much business here and there, that we have not got the *hang of the thing*; our minds are too diluted, too undisciplined.

Stock.—I am pleased in saying our people are beginning to take great pride in the improvement of stock, which had been much neglected. There is anxious inquiry made after Durham and Devon cattle. The Berkshire and Chinese hogs are found on many plantations. Horses of the best blood are sought out, in which we were shamefully deficient. I was much pleased with your description of the Morgan horse, and would be glad to see the breed introduced among us. I think it the most perfect form of the horse. Our blood horses of Virginia stock, although some of them are excellent road horses, are too delicate for plantation drudgery. The Morgan horse seems to combine strength and speed. I do not yet despair of seeing them introduced, as the spirit of improvement is abroad, and who shall stay its course? It is indeed a pleasing contrast with the retrospect of past years. The mass of our population in earlier periods being employed in making turpentine and tar, farming was a secondary employment. I well recollect when the horses, after plowing by day, were turned out to graze in the woods by night, and it was sometimes noon next day before they could be found. The horses being weak, the ground was only miserably scratched, hence shallow plowing has been handed down to us; and as it comes time-honored with the rust and sanction of antiquity, many are still irrevocably attached to it. Our horses, indeed, were of the sorriest description, and in general, our cattle and hogs no better. J. D. J. *Topsail, New Hanover Co., N. C.*

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Wages of Labor.—The Report of the Commissioner of Patents contains an extended tabular statement of the prices paid to farm laborers and to mechanics, in the various counties of the different states of the union. The following gives the substance in a condensed form:—

Farm Laborers.—Maine—northern parts—$12 to $15 per month.

New Hampshire and Vermont—$12 per month.

Massachusetts—eastern—$12 to $14 per month.

do. western—$11 per month.

New-York—mostly $10 per month, often $12 per mo., a very few $8 per mo.

New Jersey—$15 per month, and not boarded.

Pennsylvania—mostly $10 to $12 per month.

Maryland—$8 to $10 per month, 37 to 50 cents per day.

Virginia—southern—$5 per month—northwestern, $10 per month.

North Carolina—northern and central, $7 to $8 per month—western, 50 to 75 cts. per day.

South Carolina—western, $5 per month—northwestern, $6 to 10 per month—northeastern, 28 cents per day—central, $8 to $10 per month—white laborers, $15 per month.

Georgia—northwestern, $15 per month, or 75 cents per day.

Alabama—southern, 30 cents per day—northern, 25 cents a day—central, 50 cents a day.

Mississippi—colored, 50 cents a day; white, $12 to $15 per month, and found.

Louisiana—the older settled portions, $12 to $15 per month, and found—newer parts, 50 cts. per day.

Tennessee—western, $10 to $12 per month—eastern, $10 to $15 per month.

Kentucky—eastern, $7 to $10 per month—western, $8 to $12 per month.

Ohio—mostly $10 per month—rather higher in the southern parts.

Indiana—$9 to $10 per month.

Illinois—central and southern, $8 to $10 per mo.—northern, $15 to $20 per mo.

Michigan—very variable, average about $11 per mo.

Iowa—about $12.50 per month.

As a general average, wages are higher in more newly settled regions, especially where emigration is rapid and enterprise considerable; in older country places, the wages are lower, except near large cities, where they are high. In the slave-holding states, wages are generally considerably lower than elsewhere, with the exception of the sugar region in Louisiana, and the more southern, newer, and cotton producing portions. To these general remarks, there are of course exceptions.

Mechanics.—In the more northern and eastern states, the daily wages are from $1 to $1.25, being higher in cities. In the more northern slave states wages are not quite so high. In the newer slave states the wages of mechanics are high, varying from $1 to $2. In the western states, the price is greatly variable, being from 75 cts. to $2 per day; scarcity in a supply tending to advance the price; while the low price of provisions, and consequent higher rate of money, has a contrary tendency.

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Age of Trees.—De Candolle gives a table of old trees, from which it appears that the elm has been known to reach 335 years; cypress about 350; ivy 450; larch 576; orange 630; olive 700; oriental plume, 720; cedar of Lebanon almost 800; oak 870, 1080, 1500; lime 1076, 1147; yew 1214, 1458, 2588, 2880. How wonderful do the immense ages of these trees appear, when contrasted with the short period of existence allotted to some other specimens of the vegetable world! Some plants, such as the minute fungi, for example, are said to live only a few hours, or at most, a few days. Most mosses live but one season, and the greater portion of our cultivated plants are annuals, which die as soon as they have ripened their seeds.

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Packing Apples for Sea Voyages.—The following method is described by a writer in the *Farmer and Mechanic*, which he adopted, for packing fine and selected apples for exportation to England. When they arrived at Sheffield, every one was sound. The very finest only were selected, and the moisture, if any carefully wiped off; each apple was then rolled in clean, dry, wrapping paper. The barrel was then thinly lined with straw, and the apples placed in as closely as possible, without jamming them, and then headed up. An inside lining hoop prevented all danger of the heads being knocked in by accident. Thus put up, they could not be made to rattle by common usage. Directions were sent with them as follows:—" These barrels of apples are not to be rolled or tumbled about; if carted, or sent by land, something is to be put on the floor of the cart or wagon, to keep them from being bruised, rattled, or jolted." This care and labor will appear small when it is recollected that it may insure an additional price of several dollars on each barrel, in the English market.

ANSWERS TO INQUIRIES.

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Sowing Wheat in Drills.—Bertie Co., North Carolina. The preparation of the soil for sowing wheat in drills, is the same as for sowing broadcast. The wheat may be sown with a drill calculated for the purpose, or the ground may be marked out in furrows, by what is called a ribbing plow, the wheat sown broadcast by hand, and the ground harrowed lengthwise the furrows, which throws nearly all the wheat into the furrows. The drills or rows are usually about ten inches apart. There are some machines for drilling wheat used in this country, but we cannot say where any are made for sale, or what the cost of them would be. About a bushel and a half of seed, is the quantity usually sown per acre in drills. The running together, or packing of the soil, of which you speak, we presume could be to some extent obviated by running a coulter between the drills after the ground has become settled, in spring. (See our article on the " Cultivation of Wheat," in our February number.)

Relative Advantages of the West and South.—A Subscriber, Malone, N. Y. The advantages presented to emigrants by any section, can only be fairly estimated by a personal examination, by the persons who contemplate a removal. We would advise you to go and see for yourself. The facilities of travel are now such that but little time or expense is required to reach almost any part of the country.

Ashes and Guano.—J. O. H., Manhasset, Long Island. We can see no reason why ashes applied to the ground in connection with guano, should " counteract or neutralize " the effect of the latter; but if any one can speak from experience on the subject, we should like to hear.

Dairy House.—A Subscriber., Springdale, Ohio. We should prefer to have a dairy-house sunk about four feet in the ground. A cooler temperature would thus be secured than if it were built wholly on the surface. For the milk of thirty cows it should be not less than sixteen feet square. The bottom should be nicely flagged with stones, or if bricks or tiles should be used, they should be of the hardest kind. Soft bricks absorb and retain the slops, and are liable to emit an unpleasant odor. The walls should be of brick or stone, and not less than twelve feet in height, as the height keeps the room cooler, and favors a circulation of air. The windows should be shaded by blinds or shutters, hung at the upper end, which will admit of their being raised without letting in the sun, and the entrance of insects should be prevented by wire screens. A free circulation of air should be kept up, as this is essential to keeping the milk in a sweet state, and to the separation or rising of the cream. An ice-house should join the dairy-house, or be separated from it by a closet, and there should be a passage with doors from one to the other. The building should be protected from the sun by shade trees, but they should not be so close as to obstruct the passage of the air.

Cultivation of Onions.—There is no difficulty in producing onions from seed in one season of a size large enough to suit any one. They will grow well upon any rich soil, except that which is quite gravelly and dry. Plenty of rotten compost manure and leached ashes, worked slightly into the soil, the top of the ground made fine and smooth, the seed sown as soon as the ground is in proper condition, in rows fifteen inches apart, the plants thinned to two inches apart, and kept clear, will ensure a crop. The average yield with good cultivation, is from 300 to 600 bushels per acre.

Potatoes from Seed.—E. H.. Cedar Point, N. C. There is no difficulty in raising potatoes from seed. Gather the balls in the fall, or after the vines are dead, mash them, wash out the seed, dry it, and plant it an inch deep in loamy soil next spring. Plant in a seed bed, as you would cabbages, and transplant the young plants to hills two feet apart, in good soil. Some will grow nearly as large as hen's eggs the first season; but it will require about three seasons to fully develope their character.

Injury to a Cow's Teat.—J. L. R., Wilmington, Del. If the teat has healed with an open rent in the side, we can hardly tell what would be best. Perhaps if the edges of the opening were slightly scarified, and then brought in contact by a suture or by adhesive plaster, a natural closing might be effected. As to drying up this teat, we do not see how it could be done so long as the milk is involuntarily discharged through it.

Black Ants.—C. H. Gum Camphor, laid in the tracks of ants, is the best article for keeping away these troublesome insects, which we have ever tried.

Extirpation of Dock.—A. H. N. The best way to kill docks is to pull them up, or cut with a tool made for that purpose. They should be cut at least two inches below the surface, in order to take off all the eyes and prevent their sprouting.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from J. O. H., A Subscriber, N. Longworth, B. H., A Subscriber, Samuel Guthrie, E. Bridge, J. L. Roche, D. A. Ogden, Prof. J. P. Norton, G. Butler, L. H. J., W. L. Eaton, F. Holbrook, S. S. R., Eli Westfall, R. D. H. T. W. Olcott.

M. W. P.'s notes were intended for this No., but we find them, now that the paper is full, among the papers postponed to next month.

Books, Pamphlets, &c. have been received, since our last, as follows:

The Physiology of Digestion, with experiments on the Gastric Juice, by Dr. W. Beaumont, surgeon in the U. S. Army. 2d. edition, corrected by S. Beaumont, M. D. From the publisher, C. Goodrich, Burlington, Vt.——*Descriptive Catalogue* of Fruit and Ornamental Trees, Shrubs, Green-house Plants, &c., grown in the Buffalo Nursery by Benj. Hodge, very tastefully got up, and valuable for its decriptions of fruits, &c., and its hints on the culture of trees and plants.——*Fresh Gleanings*; or a new Sheaf from the old fields of Continental Europe. By Ik. Marvel. In two parts. Harper & Brothers, New-York. From the Author.

The coming State Fair.—This annual festival will commence at Saratoga on Tuesday, the 14th inst., and will continue three days. We trust that all competitors will be in readiness to comply with the published requisitions of the Society. The examination of articles and animals, it should be remembered, will take place on the *first day* of the exhibition. The Executive committee have given notice, that "stock and articles must be on hand on Monday, the 13th of September, and duly entered at the business office and arranged on the ground and in the buildings, so that an examination can be made by the judges on Tuesday." The judges are also expected to be present on the 13th. The Executive committee also give notice that—

"☞ Persons intending to send stock and articles for exhibition by the Albany and Schenectady Railroad are desired to communicate with C. L. Lynds, Esq., superintendent at the office of the Company, Albany. Articles should be directed to his care with plain and full directions. Those intending to send by the way of Troy, will direct to the care of Jonathan Edwards, Esq. President of the Troy and Greenbush Railroad, Greenbush, and with full directions. All articles left to the care of either of the gentlemen above named, will be forwarded without delay."

From all quarters we hear that preparations are being made for an extensive show, and we have no doubt that every department will be well filled. We presume the show of horses in particular, will be large, comprising many fine animals. Besides the wide competition among horses in our own State, there will, undoubtedly, be many from abroad. We have already been informed that "Black Hawk" from Vermont, "Gifford Morgan," (twenty-one years old,) from New-Hampshire, and a noted Morgan horse belonging to S. Steele, Esq., of Stanstead, Canada East, will be on the ground, together with specimens of their progeny; also the horse "Top-Gallant," from New-Jersey, owned by Mr. S. C. Smith. [See his advertisement in this number.] We presume there will also be specimens of fine-wooled sheep from Connecticut, Massachusetts and Vermont, besides a liberal show from the best flocks in this State. The occasion will afford an excellent opportunity for the purchase of fine stock of all kinds, as well as implements of agriculture, &c., &c.

Mr. Norton's Return.—Professor John P. Norton, whose interesting letters from Europe have appeared in the Cultivator, has again returned to this country; having, in addition to several years' study in the laboratory of Prof. Johnston, at Edinburgh, passed a year in chemical and physiological investigations under the direction of the celebrated Dr. Mulder, at Utrecht. He now goes to New-Haven to assume the duties devolving on the professorship of Chemistry, to which he was some time since appointed, in Yale college. Though the ground on which he is about to enter, is in a great degree, untried in this country, we can hardly doubt, that with the sound practical sense and scientific acquirements which he brings to the task, his success in demonstrating the connexion of chemistry with agriculture, will ultimately be complete and satisfactory.

Annual Fair of the American Institute.—The twentieth annual exhibition of this institution, will commence at Castle Garden, in the city of New-York, on the fifth of October next. Specimens of manufactures and the arts, designed for premiums, must be delivered at the Garden on the first and second days of October, and vegetables, fruits and flowers, must be presented before 12 o'clock, M., on the 4th. The exhibition will be open to the public on the 5th, at 9 o'clock, A. M. The show of cattle and other live stock will commence on Wednesday, October 13th, and close on Thursday, the 14th. The show ground is in the rear of Madison Cottage, corner of twenty-third street and Fifth Avenue. All entries for live stock must be made on or before Monday, the 11th of October. For particulars, see the circular of the Institute.

American Agricultural Association.—We accidentally omitted to notice in our last, that the exhibition of vegetables, fruits and flowers, under the direction of this Association, will be held at 561 Broadway, New-York, on the 8th and 9th of September. The days have been changed at the suggestion of the State Agricultural Society, whose Fair was appointed for the 15th and 16th of September, the day heretofore named for this Association. It is hoped that many of our florists and nurserymen will attend this exhibition.

Hereford Cattle—Removal.—The herd of Hereford cattle formerly known as Messrs. Corning & Sotham's, which has for several years been kept on Mr. Corning's farm, near this city, has been divided. A considerable portion of the herd had been disposed of and taken to different parts of the country during the past winter and spring. Of the remainder, Mr. Sotham has taken the larger portion to the Western part of this State, near Black Rock. He left here the latter part of July with twenty-five head of superior animals. It is his intention to continue to breed these cattle for sale. We are told that the farm to which they have been taken, is well adapted to grass and the rearing of stock; the location in respect to communication is also favorable. On any day during the season of navigation, stock may be sent westward by steamboat to any port along the lakes, from Buffalo to Chicago. Eastward, they may be sent by steamboat to any part of the country along the shores of lake Ontairo, or the St. Lawrence, or by boats through the

Erie canal. The herd of stock will be a great acquisition to the immediate vicinity in which it is located, and the farmers will find it greatly to their advantage to introduce the blood into their herds as fast as practicable.

Mr. **Corning** still keeps at his farm a few prime individuals of the former herd.

☞ Mr. **Sotham's** post-office address is Black Rock.

Egg-Hatching Machine.—We would call attention to the advertisement of Mr. **Hoffman's** machine, in this number. We think there can be no doubt that it is superior to any thing of the kind heretofore in use, and it is the opinion of those familiar with its operation, that it is destined to come into general use.

Bees.—In the month of July last, Mr. **St. John**, who has charge of the public grounds attached to the Capitol here, discovered a swarm of bees on one of the trees in the park. He cut off the limb to which they were attached, and took them down; when it was discovered that they had made a considerable quantity of comb, and were evidently at work in their usual way. The top of the tree was very thick and full of foliage, completely protecting the bees from the sun, and affording besides, some shelter from rain. There is no doubt that they would have continued to make this their "abiding place" till frost and cold weather would have destroyed the leaves and their own lives. They were readily put into a hive, and are doing well.

Death of American Eclipse.—In our June number we mentioned that this noted horse was still alive and well. He, however, died on the 11th of July last, at Shelbyville, Kentucky. He was at the time of his death, the joint property of **Jilson P. Yates** and **S. T. Drane.**

Cloth of Gold Rose.—Mr. **James Wilson** has sent us samples of this celebrated rose. It appears to flourish well in his garden, producing numerous flowers of good size and beautiful form.

Vanilla.—J. D. Jones, of Topsail, North Carolina, has sent us some leaves of a plant which he says grows wild in the woods of that section. He observes, "It is said to impart an agreeable flavor to tobacco used for smoking. It might no doubt be much improved by culture, and I think could be rendered an article fit for commerce. It is one of the most agreeable perfumes in nature." The plant commonly called Vanilla, is described as an orchideous climbing shrub of Mexico and tropical America. Whether the leaves sent us by Mr. **Jones**, are from a plant of this species, we cannot tell; they, however, emit an abundant and very agreeable odor.

Apple-paring Machine.—We have lately seen an improved machine for paring apples, invented and patented by Messrs. **Bullock & Benson** of New-York. We had supposed that Yankee ingenuity had previously brought this article to the greatest possible perfection; but it will be admitted that something new has been added, when the fact is known that this machine will perfectly take off the skin of an apple in the neatest manner in about one second, and that it will continue to work at this rate as fast as the apples can be taken off and put on. It is quite simple in its construction, though considerably different from the common machines of the kind. We are told that its probable cost will be about three dollars.

Renovation of the Soil.—Mr. S. W. **Tallmadge** purchased a few years since a farm of 300 acres, near Castleton, nine miles below this city. A large portion of the farm had been much reduced in fertility, from having been "hard run" for several years before Mr. T. purchased it. In his first attempts at renovation, he purchased in the city large quantities of oyster-shell lime, leached ashes and stable manure, which were transported to the farm and liberally applied. After several years trial with these articles, Mr. T. came to the conclusion that their effects were not of sufficient value to balance the cost of purchase and transportation, and that some less expensive mode of manuring must be adopted. He is now, therefore, operating on the following plan: Clover and Timothy seed are sown, and the crop, (or nearly the whole of it,) is allowed to die and rot on the ground. The first year, the growth is principally clover, the second, clover and timothy in about equal proportions, and third nearly all timothy. By the fourth year, or sooner, according to the previous state of the ground, it is to be broken up, and cropped to the extent which shall appear to be expedient. The previous course to be repeated to the extent which may be necessary to prevent the deterioration of the soil. Some of the fields under this course had on them a growth equal to a ton and a-half to two tons of hay per acre.

We would suggest to Mr. **Tallmadge** an experiment in connexion with his system, viz: that he should lay off an acre of this land—which should be of equal quality and have on it an equal quantity of clover and grass compared with the land adjoining—and pasture it with sheep for as many seasons as the crop on the other portions of the lot shall be rotted on the ground. Keep the growth on the pastured piece fairly fed down, not gnawed to the roots, but permitting nothing to go to seed. Credit the pasturage of the sheep at a fair price. Break up the pastured acre in connexion with the same extent of adjoining land—or together with the whole field, as may be convenient—crop both portions alike, under the same treatment. Carefully compare the product of the pastured and unpastured portions; and after having ascertained and set down the value of each, add the value of the pasturage to its appropriate portion, *and let us know which acre shows the greatest profit.*

Plaster.—Mr. **Tallmadge** has frequently used gypsum on portions of his farm which have been several years under cultivation, but without the least perceptible effect. This season, however, he is cropping for the first time some new ground, and the Indian corn and potatoes are evidently much benefitted by plaster. The contrast between the rows to which it had been applied, and the adjoining ones, where it was purposely omitted, was obviously in favor of the plaster.

Plank Roads.—In company with **George Geddes**, Esq. we lately enjoyed a ride on the Salina and Central Square plank road. This road, in constructing which Mr. G. was engineer, was completed during the past year. Its length is fifteen miles. It is decidedly the most agreeable road to ride over, that we ever saw. The carriage glides along as smoothly as on the frozen surface of a lake or river. The plank are hemlock, eight feet long and three inches thick; laid immediately on the earth, which is made perfectly smooth to receive them. They keep their places without any fastening. On one side of the road there is a good ground track, twelve feet wide, made exactly level with the plank, on which carriages turn out, and which in dry weather is a good road. The cost of this road (including both the earth and plank tracks,) was $1,500 per mile, and it is expected the plank will last eight years. A team will carry about double the weight on this road that it will on the common roads, and a horse in a light carriage will readily go along at the rate of sixty or seventy miles a day. In sections where plank can be cheaply procured, we have no doubt that these roads will be found profitable.

Large Egg.—W. **Walsh**, Esq., has left with us a hen's egg which weighed 4¼ ounces, and was eight inches and three-fourths in circumference the longest way, and seven inches the other. It contained two yolks. We are told that the hen frequently lays such, but we presume she cannot afford to lay but half as often as common hens, as her eggs are twice the common size.

Hand Stocking-Loom.—A correspondent wishes to obtain information in regard to a hand stocking-loom. If such a machine is manufactured for sale, we shall be obliged if any one will inform us where it can be had, stating the price, and whether it could be used to advantage by a person unacquainted with it.

New Plum.--Mr. J. S. Walsh has left us a specimen of plums, produced by a seedling tree now growing on his farm near this city. Its size is rather small, shape round, color reddish purple; flesh tender and sweet, with a little astringency next to the skin: pit small. It has an aroma resembling some of the wild plums, and from its taste and general character, it is not improbable that it is a hybrid between the wild plum and some cultivated variety. From its earliness, (being ripe the fore part of August,) and good flavor, we should think it worthy of propagation.

Red Astrachan Apple.—Mr. Kirtland of Greenbush, has left us a very handsome sample of this fruit. It is one of the most beautiful apples grown—of large size, deep red color, and of an agreeable acid flavor. It was taken to England from Sweden about thirty years ago, and from thence was introduced to this country.

☞ The Vernon Agricultural Association, of Oneida county, N. Y., will hold an exhibition of farm stock, agricultural products, and domestic manufactures, at Vernon Centre, on the 6th of October next.

Bottling Insects.—The *Boston Cultivator* states that Mr. S. Pond, of Cambridgeport, practices with success the following plan, for catching insects. He hangs common glass bottles in his fruit trees, filled to the mouth with sweetened water, leaving the mouths uncorked Wasps, hornets, beetles and moths of various kinds, are attracted by the liquid, and having once entered the bottles, are unable to escape. Transparent glass is said to be better than colored—few insects being found in the latter, but great numbers in the former. It is mentioned that Mr. Ives uses pitchers instead of bottles. They are filled two-thirds full, and are hung by the handle to the branches of the trees.

Experiment in Pork Making.—B. Dinsmore, states in the *Genesee Farmer*, that he made an experiment in fattening hogs with Indian corn and barley, by which the hogs gained one pound, live weight, for every four and a-half pounds of grain eaten. The food was cooked by boiling from six to twelve hours. The corn was boiled whole, but the barley was first ground. He thinks grinding is of no benefit, provided the grain is cooked enough.

Comparative Weight of Fleece and Carcass.—Fleeces vary so much in cleanness, that it is nearly impossible to ascertain the relative proportion of fleece and carcass, by merely weighing each at the time the wool is taken off. Some have estimated that Merino and Saxon sheep would give a pound of wool to 18 or 19 pounds of carcass. W. D. Dickinson states in the *Genesee Farmer*, that he weighed his sheep and their fleeces this season, at the time of shearing, and found that they varied from one pound of wool to eight pounds five ounces of carcass, to one to twenty-eight pounds. His yearling ewes averaged a pound of wool to 13¼ of carcass; yearling rams, 1 to 16⅛; yearling wethers, 1 to 16¼; two-year-old rams, 1 to 14; two-year-old wethers, one to 17⅛; fat sheep, 1 to 17⅛; breeding ewes, 1 to 18¼. The whole flock, consisting of 176, averaged a pound of wool to about seventeen pounds of carcass. The wool is said to have been well washed, free from gum and nearly so from oil. The greatest weight of wool in proportion to the weight of carcass was a yearling ewe weighing 40½ lbs., and which gave 4 lbs. 14 oz. of wool, about 4½ inches in length; another weighed 50½ lbs., and sheared 4¾ lbs. wool.

White Carrots.—Henry Coleman says that the Belgian white carrot has come greatly into favor in England. A distinguished farmer there finds it thirty per cent more productive than common carrots. One farmer had grown nearly 32 tons per acre, average 24 tons; another usually obtained 25 tons; another, with high manuring, obtained a hundred tons from three acres. Another had grown 4,800 bushels or 1,200 per acre on four acres. In this country, its comparative productiveness is as great as in England, and projecting several inches above ground, is harvested with great facility. But it will not endure the winter in the ground; which, however, sometimes destroys the yellow carrot, when unusually wet. Seeds of the white carrot do not ripen so readily, and much bad seed is sold; hence farmers planting this variety, should be on the look out.

Preventing smut in Wheat.—H. B. Hawley, in the Prairie Farmer, says, in speaking of the preparation of seed wheat, by soaking in brine, and then rolling in lime, "I sowed thirty acres on new breaking, the seed of which was prepared as stated, except two casts, not prepared; this was very smutty; a stranger could have followed the strip by the smut and chess. That which was brined and limed, had a little chess, but no smut in it. My other wheat, not prepared, sown on stubble, was smutty and had much chess. That which was brined and limed, yielded 20 per cent more than that which was not; and brought ten cents more per bushel than the other; it weighed 64 lbs. per bushel, although 4 lbs. were gained in part by cutting early." The brine did not of course kill the chess, but the increase of wheat repressed it by partial smothering.

E. D. Smith, of Brown county, Ohio, states in the Ohio Cultivator, that neither fly nor rust has injured his crop for the last four years, during which time he has prepared his seed by brining and liming. Of his neighbors' crops, what has escaped the fly, has been greatly injured by rust.

To save a load of Hay.—A sudden shower, on large western farms, sometimes spoils a load of wheat or hay, or a partly finished stack. Solon Robinson says, "I have often thought that an oil cloth (tarpaulin) large enough to cover a load of wheat or half-built stack, would be one of the most useful things a prairie farmer could own. It would be truly a labor-saving instrument." Who will remember this till next harvest—or procure such a cover now that it may be ready?

Charcoal as Manure.—I. Dille states in the Ohio Cultivator, that he has tried charcoal as manure with great success. He had sown wheat on a piece of ground three times, in each case with failure. Charcoal dust (quantity not stated) was applied as manure, and the succeeding crop was 25 bushels per acre, of very fine and plump wheat. As "one swallow does not make a summer," other experiments would be satisfactory, especially as other experiments with charcoal have resulted in no apparent effect whatever.

Winter-Killing of Grass.—The *Massachusetts Plowman* says grass is not winter-killed for want of depth of root; "the roots are *broken off at the surface* by freezing and thawing, where the surface is clayey, or of a nature to adhere to the plant." This strikes us as being reasonable; but we should like to know how it agrees with the observations of others.

Large Farming.—A writer in the National Standard says that Robert B. Bolling of Virginia, has *nine hundred acres* of fine wheat, *one thousand acres* of grass, *three hundred* of oats, and *seven hundred* of corn

—his whole farm containing seven thousand acres. His land, formerly very poor, has become fertile by the use of lime, and plowing in straw.

ROADS.—England is famous for its good roads. Great care is taken to avoid hills, it being found much cheaper in the end to go around a hill than to go over it. What would the English think of many of our roads, which cross steep hills by a *longer* route than would have been needed to avoid them! Foot paths are usually made with care on one or both sides of the road; hence their healthy women.

NOTICES OF NEW PUBLICATIONS.

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FRESH GLEANINGS; or a New Sheaf from the Old Fields of Continental Europe; by IK. MARVEL. Published by HARPER & BROTHERS, New-York.

A cotemporary has remarked that "this is just the book for an idle hour." It is really such, though the style is so well chosen as to combine the instructive and agreeable in the happiest manner. It is a free and off-hand description of what the author saw in his travels through most of the kingdoms of Europe, interspersed with many useful moral reflections. We may be permitted to say that the work is from the same hand as the "*Rural Notices Abroad*, by CAIUS," which have been published in the Cultivator, and which have been received with much commendation by our readers. It is executed with much neatness, both as to paper and typography.

The Literary World, for Aug. 21, reviews this work at considerable length. The writer says—"Unless it be Saunders' 'American in Paris,' we can recall no work of European travel, either English or American, that surpasses these Fresh Gleanings, in spirit and cleverness."

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FIFTH ANNUAL REPORT OF THE AMERICAN INSTITUTE, made to the Legislature. April 20th, 1847.

This is a neat volume of 558 pages. It comprises in full the doings of the American Institute for the year 1846. It contains many valuable essays and papers relating to agriculture, gardening, the mechanic arts, &c., besides several spirited and interesting speeches and addresses, delivered before the Institute.

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THE AMERICAN ARCHITECT; comprising original designs of Country Residences, adapted to the taste and circumstances of the Merchant, the Farmer and Mechanic; by RITCH & GREY, Architects. Published by C. M. SAXTON, 205 Broadway, New-York.

The object of this publication is to introduce original designs of country seats, adapted to the varied tastes and circumstances of our population—from the villa to the cottage and farm-house. The requisite details, specifications, plans, and directions, with careful estimates of the cost, accompanying each design. Published monthly, at 25 cents per number. P. COOKE, 454 Broadway, Albany, is agent for the work.

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THE DISTRICT SCHOOL JOURNAL of the State of New-York, Albany, WM. H. CAMPBELL, Editor—50 cents per year.

This Journal has recently appeared in a decidedly improved form, on new type and good paper. It is now conducted by the Rev. WM. H. CAMPBELL, a gentleman, if we may judge from the few numbers issued under his direction, admirably qualified to conduct such a journal. We are glad to see that it is assuming a more popular character—one well adapted to interest parents and children as well as teachers. A copy of this Journal is sent, by the State, to each of the 10,000 or 12,000 school districts in this State.

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AMERICAN JOURNAL OF SCIENCE AND ARTS.—We have before us the July number of this ably-conducted work. As usual, it contains much scientific information, a considerable portion of which possesses general interest. Among the more popular articles, we notice one on the Whirlpool and Rapids, below the Falls of Niagara, with illustrations, by R. BAKEWELL; Description of Two New Species of Fossil Footmarks found in Massachusetts and Connecticut, or, of Animals that make them, by Rev. EDWARD HITCHCOCK; Glycocoll, (Gelatine of Sugar,) and some of its Products of Decomposition, by Prof. E. N. HORSFORD; Reports on Meteorites, by Prof. CHARLES UPHAM SHEPHERD; Facts in Physilogical Chemistry, in a letter by Baron von LIEBIG to Prof EVERETT, of Harvard University; Nutrification and Fertilization of Soils, by F. KUHLMAN. This work is conducted by Professors SILLIMAN & DANA, and published (at New Haven,) on the first day of every second month, $5 per year.

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SOUTHERN CULTIVATOR.—In our last number we noticed the death of Mr. CAMAK, late editor of the *Southern Cultivator*. The August number of that publication announces that Dr. DANIEL LEE is about to take charge of its editorial department. Dr. L. is extensively known as an able agricultural writer. He has for several years been connected with the *Genesee Farmer*, as its principal editor, and he has devoted much time and study to the investigation of the sciences with which agriculture is especially connected. We trust the new connection he has formed will prove mutually satisfactory and beneficial, to himself, to publishers, and to patrons.

FOREIGN NOTICES.

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SALE OF COTSWOLD RAMS IN ENGLAND.—The *Mark-Lane Express* states that at Mr. W. HEWER's ram-sale, on the 24th July, forty-two improved Cotswold rams brought an average of £17, 3s. 8d., being equal to about $85 each. The same paper states that at Mr. CHARLES LARGE's sale, on the 31st of July, forty-two rams sold at an average of £18, 18s. 6d., equal to $94 and a fraction each. Most of the sheep were shearlings or yearlings. Mr. LARGE took four prizes at the late meeting of the Royal Agricultural Society at Northampton.

THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND, held its annual exhibition the present season at Northampton, from the 20th to the 23rd of July, inclusive. The show of animals was considered equal to any former one. The Short-Horn, Hereford, and Devon cattle in particular are spoken of as being uncommonly fine. The prizes for the two best Short-Horn bulls, were awarded to JOHN PARKINSON, of Ley-fields, near Newark, and WM. SMITH of West-Rasen; for the best Short-Horn cow, to RICHARD BOOTH, of Warlaby, near Northallerton. The prizes for the two best Hereford bulls, were awarded to SAMUEL ASTON, of Lynch Court, Leominster, and GEORGE PITT, of Wellington, near Hereford; for the best Hereford cow, to WM. ABBOTT, of Glinton, near Peterborough. The prizes for the two best Devon bulls, were awarded to THOMAS BOND, of Bishops' Lydiard, and the Duke of MANCHESTER, Kimbolton castle. In Leicester sheep, the two prizes for rams in class 1, were awarded to T. E. PAWLETT, of Beeston; the first prize in class 2, to ROBERT SMITH, of Burley-on-the-Hill, near Oakham; for ewes to WM. SANDAY, of Holme Pierrepont, and ROBERT SMITH. In South Downs, JONAS WEBB of Babraham, JOHN HARRIS, of Hinton, and the Duke of MANCHESTER, obtained the prizes. In Cotswolds, CHARLES LARGE of Broadwell, near Lecklade, was the principal prize taker. All these prizes were from 20 to 50 sovereigns.

This Society has upwards of 7,000 members. During the first day of the exhibition, 1,336 visitors entered the yards; the second day, 2,738; and the third day 22,090. At the dinner of the Society, the Earl of **Chichester** proposed the health of our Minister, Mr. **Bancroft**, to which the latter replied in an eloquent speech, which was received with great applause. In allusion to the remark of Earl C. that Britain and the United States might "long remain in terms of brotherhood," Mr. **Bancroft** said—

"I respond fully, and in the name of every American, in the wish that has been uttered, that peace may be continued forever—(cheers) nay, rather let us hope that the relations between our countries, the international intelligence betwixt us, may lead to such intimate relations that the very thought of the disturbance of peace may be dismissed from our minds, and that it may seem a vain, unnecessary, and a useless prayer to pray that peace may be perpetual (cheers). This, gentlemen, is uttered from my heart, and every one of my countrymen will, I am sure, respond to it. I beg to renew my expressions of gratitude for your kindness to me on this occasion, and to offer my fervent prayers for the prosperity of the farmers of England (loud cheers)."

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Aug. 20, 1847.

FLOUR—Genesee, $5.62½a$5.75—Ohio and Michigan, $5.25a$5.62½. Sales about 8000 bbls., nearly all for home trade. Some English orders in market, but they cannot be executed at present rates.

GRAIN.—Wheat, Genesee, per bu., $1.25—Western red, $1.00. Market not firm. Corn, per bu., 75a77c.—closed firm at 75 cts. Rye in demand, at 87½ cts. per bu. Nothing doing in barley. Oats, new, 50c. per bushel.

BUTTER—Orange County, per lb., 19a20c.—Western, dairy, 14a16 cents.

CHEESE—per lb., 7a8c.

BEEF—Mess, per bbl., $12.50a$13—Prime, $8.50a$9.

PORK—Mess, per bbl., $15.25—Prime, $12.25a12.50.

HAMS—per lb., smoked. 10½a11cts.

LARD—Per lb. 10a10½c.

HEMP—Russia clean, per ton, $275—American, dew-rotted, $110.

COTTON—New Orleans and Alabama per lb., 8½a14¾c.—Upland, 8½a14¾c.

WOOL—(Boston prices,) Aug. 18.

Prime or Saxon fleeces, washed per lb.	45a50 cts.
American full blood fleeces, ...	40a45 "
" three-fourths blood fleeces, ...	35a38 "
" half blood do	32a33 "
" one-fourth blood and common, ...	28a30 "

All kinds of wool in demand.

Remarks.—By the *Cambria*, which arrived at Boston on the 16th ult., we have English papers to the 3d of August. In consequence of the prospect of abundant harvests, not only in the British islands, but on the continent of Europe generally, the price of breadstuffs had still further declined. **Willmer & Smith's** *European Times* gives the following view of the decline from the 19th May to the 3d Aug: "On the 19th May, the price of American flour in Liverpool, was 48s. to 49s. Yesterday a considerable sale took place of the same description of flour, at 27s. to 27s. 6d. The highest market price of best wheat at Mark-Lane, on Monday, the 2d, when a further reduction again took place of from 8s. to 10s. per quarter below the currency of the previous Monday, was 70s per quarter." The harvest is nearly over in France, and had commenced in England. The potato disease had made its appearance in but few districts, and only in a modified form. The cotton market has been firm for the most part, since the sailing of the Hibernia. The demand for American salted provisions was fair. The wool trade was generally brisk.

The effect of the late declension in the prices of breadstuffs abroad, has not been so great here as might have been anticipated, owing to the small supply in market, and the quantity called for on domestic account.

THE CULTIVATOR ALMANAC FOR 1848.

WE are ready to receive orders for the Cultivator Almanac for 1848, being the fifth year of its issue. The astronomical calculations, which are made for New-York city, are by G. R. **Perkins**, Professor of Mathematics in the New-York State Normal School. In the variety of its contents, (consisting mainly of brief hints and suggestions on agricultural and horticultural matters, rural and domestic economy, &c.,) and in the number of its illustrations, it will be found superior to any of the previous numbers. It is furnished on the following terms: For 1,000 copies, $15—for 2000 or more, $12.50 per 1000—the purchaser to have the privilege of occupying the last page with advertisements, and his name inserted as publisher on the title page. Orders to be addressed to **LUTHER TUCKER, Albany.**

Sept. 1, 1847.

Z. C. ROBBINS, Attorney, and Agent for procuring patents, Washington, D. C., will be at Saratoga Springs during the two last days of the sitting of the State Fair, where he may be consulted on all subjects connected with his profession. Persons desirous of consulting Mr R., can ascertain where he may be found by making inquiry of Nathan F. Coleman, Esq., of Saratoga Springs, or of the Editor.

Sept. 1, 1847—1t.

VISITORS TO THE
New York State Agricultural Fair,

TO be held at Saratoga Springs, on the 14th, 15th, and 16th of September next, who may be unable to obtain accommodations at the Springs, will find comfortable quarters at the SANS SOUCI HOTEL, Ballston Spa. M. J. THOMAS

☞ Several extra trains will run daily to and from Saratoga and Ballston, [a distance of six miles,] during the continuance of the Fair.

Sept. 1, 1847.—1t

WILSON, THORBURN & TELLER,

IN addition to their other nursery stock, will have for sale this fall, Beurre Langlier, Leon Le Clerc, Colmar D'Aremberg, Inconnue, Van Mons, and Althorp Crassane Pears.

W., T. & T. would also inform the public that they have made an arrangement with Dr. **Herman Wendell**, by which they are to have the control of the stock of his magnificent new seedling cherry called "Wendell's Mottled Bigarreau," trees of which variety they will have for sale in the autumn of 1848.

Sept. 1, 1847.—1t.

BUFFALO NURSERY AND HORTICULTURAL GARDEN, BUFFALO, N. Y.

THE stock of fine, thrifty Apple trees, now of size for sale, is unusually large and fine. The assortment of Cherry trees is also very extensive, comprising the most choice and popular sorts. Peach trees, a very fine collection, healthy and free from disease. Pear trees of the most choice and select varieties, both on free stocks and also worked on quince stocks, for dwarfs or garden culture. But seven trees in these nurseries have ever been affected by fire blight. Also, a very general assortment of the Plum, Quince, Apricot, Nectarine, Gooseberry, Currant, Raspberry, Strawberry, &c.

The assortment of Ornamental Trees and Shrubs, Flowering plants, embraces almost every desirable article in this department.

Roses, 240 varieties. Many very choice and rare varieties of Moss, Hybrid Perpetual, Bourbon, and other roses, have recently been added to the collection.

A fine collection of Green-house Plants; among them 30 choice varieties of the Camelia Japonica.

Very extensive additions are constantly being made to this establishment, and no expense has been spared to render it as perfect as that of any other in our country. Trees destined for the west will be shipped at Buffalo, per steamboat or propeller, unless otherwise ordered; and the advantages that these nurseries possess over eastern nurseries in supplying the great west will be seen at a glance. To say nothing of the extra expense of transportation, the saving of eight or ten days, [very often two or three weeks,] in their transportation, is an item of some little importance.

The new Descriptive Catalogue of this establishment, a pamphlet of 60 pages, giving a full description of several hundred varieties of fruits, &c., will be sent gratis to all post-paid applicants. Orders by mail, or otherwise, will receive the most prompt attention.

Buffalo, Sept 1, 1847.—2t. BENJ. HODGE.

CHOICE FRUIT TREES AT LOW PRICES.

FOR sale at the Walworth Nursery, by the subscriber. 50,000 choice Apple Trees, from one to four years from the graft, and grafted in the root.

30,000 choice Peach Trees, of about forty different varieties, grown in one of the best fruit growing districts of the country. It is beginning to be very generally understood, that peach trees grown in this vicinity are more hardy and healthy, and much more valuable than from almost any other source. These will be sold in small quantity, at 18¾ cents, and in large quantities at a very large discount from the retail price, and can be packed and shipped conveniently.

3,000 budded and grafted Pear trees, embracing 60 choice sorts, many quite new, from one to three years old.

500 Plum trees, of about 20 choice kinds.

2,000 Cherry trees, of about 15 of the best sorts cultivated.

200,000 Apple Seedlings, $5.00 per 1000. Two years old and stocky, nearly all very nice for grafting, and the smaller for budding next season.

Any trees at this nursery will be sold cheap, and carefully packed to order.

Peach stones furnished to order in September and October. Scions cut and packed at the proper season, of all my *choice fruits* at low prices.

Large inducements will be offered to such as wish to buy trees to sell again.

Catalogues furnished to all who wish, and all *post-paid* communications and *orders containing remittances* promptly attended to.

REFERENCES.

Messrs. Gould and Germond, 29 Nassau-street, New-York
" Butler & Jones, 46 Front " New-York
" Seeley & Crawford, 107 Broad " New-York
Mr. Edwin Hunt, 20 Platt " New-York

T. G. YEOMANS.

Walworth, Wayne Co., N. Y., Sept. 1, 1847.—1t.

TO NURSERYMEN AND GARDENERS.

THE subscriber, intending to change his business and remove to another state, offers for sale at his nursery, near Norristown, Pa., his stock of FRUIT and ORNAMENTAL TREES, GREEN-HOUSE PLANTS, &c., at a low rate.

For particulars address **PERCIVAL NICHOLS**, Norristown, Montomery Co., Pa.

August 11th, 1847.—1t*

NURSERY BUSINESS FOR SALE.

THE entire stock and good will of of the *Walnut Hills Nursery*, at Cincinnati, Ohio, is offered for sale. There is no better opening in the west, perhaps none better in the country, for a man of some capital and experience. The communication over a great extent of country, unsupplied with trees, is easy, the climate is good, and the population thriving. The demand for trees is good and constant—increasing rapidly, much more so than the supply.

The stock consists of over 20,000 trees in various stages of growth, and contains a good and correct assortment. A copy of the inventory and statement of the terms may be had upon personal application to Mr. DOWNING, at Newburg, L. TUCKER, Albany, or D. LANDRETH, Philadelphia, and PARSONS & Co., Flushing.

Should the business not be sold to a purchaser, the trees will be offered for sale, in suitable lots, about the 1st of October, of which due notice will be given. **CH. W. ELLIOT.**

Cincinnati, Ohio, Aug. 2d, 1847.—1t.

A CARD.

THE public having manifested some interest in the result of my efforts at raising new varieties of cherries, I would take the liberty to state, that many of my seedlings have fruited freely one, two, and some of them three years.

In order that they might be thoroughly tested by an impartial person, and one at the same time qualified to judge correctly of their merits, I have placed them at the control of Mr. Elliot. He has carefully watched their progress, made drawings of the fruit, noted their qualities, and compared the results from year to year. He also is authorized to name and describe them as he deems proper; I holding myself in no wise responsible for any statement, name, or description, he may publish, though I have the fullest confidence that the most correc. and impartial descriptions will be made by him, otherwise I should not have entrusted him with the responsibility.

At the same time, I have placed in his hands the sole disposal of all buds, grafts, and trees, of my new seedling varieties, and from him in future they can only be obtained. **J. P. KIRTLAND.**

ruit Ridge, near Cleveland, O., Sept. 1., 1847.

* * *

NEW CHERRIES.

HAVING purchased of Professor J. P. Kirtland all buds or grafts that may be cut from the original trees of his new seedling cherries, as follows, viz.:

Cleveland Bigarreau,	Elliott's Favorite,
Rockport "	Ohio Beauty,
Late "	The Doctor,

and Kirtland's Mary;

descriptions of which have appeared in the Horticulturist, we offer for sale the coming fall a limited number of thrifty trees of one year's growth, at one dollar per tree. We have also for sale at the regular rates, a fine stock of trees of nearly all the new and most popular, as well as old varieties of fruits. Also ornamental trees, shrubs, roses, evergreens, &c., &c. Catalogues sent gratis to all applicants by letter, post-paid. **ELLIOT & Co.**

Lake Erie Nursery, Cleveland, Onio. Sept. 1, 1847.—1t.

FOR SALE,

THE PREMIUM STALLION, TOP-GALLANT, JR.

WILL be offered for show and for sale, at the New-York State Fair at Saratoga Springs, on the 14th, 15th, and 16th days of September next, the unrivalled Stock Horse, TOP-GALLANT, JR., owned by Spencer C. Smith, of Bloomsbury, Warren county, New-Jersey, was nine years old last June. Perfectly sound and free from blemish, is sixteen hands and three inches high, a beautiful bright bay, black legs, main and tail, and entirely free from white; lofty figure and of most beautiful form, and elegance of action.

He was got by old Top-Gallant, and he by old Whalebone, and he by Granby, and Granby by old imported Messenger; his dam was a Virginia mare, and fast trotter.

This unrivalled Horse was exhibited on the 26th day of November, 1839, at the Musconetcong Agricultural Society, and received the silver prize medal, as a premium for the best colt under three years of age; and on the 5th of November, 1840, the premium was again awarded to him, as being the best colt over one and under three years of age. And again, in Oct. 1841, at the great fair of the Am. Institute, held at Niblo's Garden, New-York, although at the age of three and a-half years, he was awarded a premium, and allowed by judges to be the best horse of his age in the United States. A few desirable points which he possesses are worthy of notice.

He has a small neat head, and handsome set ear, a bright hazel eye, a most beautifully arched neck, short strong back, wide deep chest, long under the belly, and a powerful stifle, legs moderate as to length, joints strong and compact; and although large and well proportioned, yet he possesses all the action of a thorough bred racer.

He has proved himself a sure foal-getter, and his colts are large, fast, and very fine, as satisfactory certificates will be produced of the same.

Bloomsbury, August 13, 1847.

ANCIENT AND REAL LINÆAN BOTANIC GARDEN AND NURSERY.

Late of William Prince, deceased, Flushing, L. I., near New-York.

THE new proprietors of this celebrated nursery, known as PRINCE'S, and exclusively designated by the above title for nearly fifty years, offer for sale every description, including the newest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges.

Descriptive catalogues, gratis, on application, *post-paid*.

WINTER & Co., Proprietors.

Sept. 1, 1847.—1t*

FRUIT AND ORNAMENTAL TREES.

THE subscribers respectfully solicit the attention of fruit growers and tree dealers to their large stock, offered for sale the ensuing autumn, consisting, in part, of

40,000 APPLE TREES, of the most esteemed varieties, from four to eight feet high, $12 to $20 per 100, and $100 to $150 per 1000.

8,000 trees of the NORTHERN SPY, (one of the best long keepers known,) 5 to 7 feet high, 37½ cents each, $25 per 100; 3 to 5 feet, 25 cents each, $18 per 100.

1000 trees of EARLY JOE, (a rare and delicious late summer fruit,) strong yearling trees from bud and graft, 25 cents each, or $2.50 per dozen. A number of very choice sorts are worked on paradise stocks, for garden culture; these can be furnished only of one year's growth.

20,000 PEAR TREES, of various sizes, from 3 to 7 feet high, embracing upwards of 200 of the best varieties to be found; 6,000 of these are on quince stocks, (mainly one year's growth from the bud and graft, but very vigorous,) for dwarfs, espaliers, and pyramids, just right age and size for training.

A few hundred strong yearling trees of the SWAN'S ORANGE or ONONDAGA, and the BELLE OF BRUSSELS, (two unrivalled rare fruits,) can be supplied at $1 each.

15,000 CHERRY TREES, 4 to 9 feet high, of the finest sorts; 5,000 of these are two years old, with fine heads.

12,000 PEACH TREES, vigorous and free from all diseases, composed of the most esteemed market sorts. A large stock of all the other hardy fruits. Ornamental Trees, Shrubs, and Plants, Roses, &c., &c., at low rates, by the quantity. The correctness of every article is guaranteed. Orders promply executed, and trees and plants packed to go with safety to any part of the United States, Canada, or Europe.

☞ Catalogues furnished gratis to post-paid applications.

ELWANGER & BARRY.

Mt. Hope Garden and Nurseries, Rochester, N. Y., Sept. 1—1t.

MULTICOLE RYE.

THIS kind of rye was introduced from France a few years since, but has been tried in this country sufficiently to prove its adaptedness to our soil and climate. Its yield, in most cases, is from a sixth to a fourth more than that of common rye, under the same circumstances. A few bushels for sale at the Ag. Warehouse and Seed Store, 10 and 12 Green-st., Albany.

Sept. 1. **LUTHER TUCKER.**

I. T. GRANT & CO'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hope to be enabled hereafter to supply promptly the rapidly increasing demand for that article. Their Fan-mills have taken the *first premium* at four of the New-York State Agricultural Fairs, at the State Fairs in Pennsylvania and Maryland, at the Fair of the American Institute, and at a large number of County Fairs, and secured the highest consideration at the great National Fair, at the city of Washington. They have been repeatedly tried, and the principle upon which they operate thoroughly tested by committees appointed for that purpose, and in every instance have been declared *superior* to any that have come in competition with them. They have never been awarded the *second premium*, and are the only mills manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle and *smut* at the same time. They will also thoroughly clean *rice*, and all kinds of grain and seeds by running it through once.

The materials, workmanship, and finish of these mills are superior to any in market. The bearings are all turned and finished so that a boy can turn them with perfect ease. We manufacture four sizes, (with seven sieves to each mill,) varying in price from $21 for No. 1, to $27 for No. 4, and warrant them superior to any now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premiums wherever exhibited.

Our Fan Mills and Cradles are for sale at the following places:

John Mayher & Co., 195 Front-st., New-York.
E. Whitman, 55 Light-st., Baltimore.
Denslow & Webster, Savannah, Georgia.
Fitzhugh Coyle, Washington City.
J. W. Howes, Montpelier, Vt.
Luther Tucker, 10 & 12 Green-st., Albany, N.Y.
H. Warren, Troy.

I. T. GRANT & Co.

Junction P. O., Renss. Co., N. Y., Sept 1, 1847.—4t.

GRANT'S PATENT FAN MILLS.

THE right to manufacture these celebrated mills can be obtained of the subscriber, at Junction P. O., Rensselaer Co., N. York. He also gives notice that he shall prosecute all persons who in any manner infringe upon his patent. **I. T. GRANT.**

Junction P. O., Rens. Co., N. Y., Sept. 1, 1847—4t.

FOR SALE.

TWELVE Electoral Saxon bucks, 40 young ewes, and 30 lambs. In point of fineness and admirable felting qualities, the wool of these sheep is unsurpassed. **P. F. CADY.**

Chatham, Columbia Co., Aug. 19, 1847.—1t*

PATENT RIGHTS FOR SALE.

THE undersigned has for sale, to close a concern, the patent right in "Platt's Improved Portable Burr Stone Mill," for the valuable counties of Kings, New-York, and Westchester, in state of New-York. Also, the patent right in "Warren's Improved Horse Power and Thresher," for several valuable states and counties. Applications must be made previous to 1st October.

Sept. 1, 1847.—1t. **JAS. PLANT.**

5 Burling Slip, N. Y. City.

FARM FOR SALE.

THE farm now occupied by Eli Westfall, 1½ miles east of Rhinebeck village, Dutchess county, 3 miles from the river, consisting of 126 acres of deep, mellow, sandy loam land, resting upon an admirable loam subsoil, upon which are extensive substantial buildings. I can assure any person that few farms in Dutchess County have so many advantages to render farming pleasant, healthy, and profitable.

I have cleared $700 per annum above the cost of cultivation, and am now reluctantly compelled to abandon the business in consequence of the feeble state of my wife's health. All inquiries immediately answered. This farm will be sold at *auction*, on the 13th day of next October, if not sold before at private sale.

ELI WESTFALL.

Schuyler's Mills, Sept 1, 1847.—1t*

ALBANY AG. WAREHOUSE AND SEED STORE.

A DESCRIPTIVE CATALOGUE of the numerous list of Agricultural Machines, Implements, Tools, Seeds, &c., for sale at the Albany Ag. Warehouse and Seed Store, illustrated with about fifty engravings, will soon be ready for distribution. It may be had gratis on application at the store, No. 10 Green st., or on application by mail, post-paid. **LUTHER TUCKER.**

☞ For all kinds of implements required by the farmer or gardener, such as Horse Powers, Threshing Machines, Fan Mills, Corn Mills, Corn and Cob Crushers, Hay and Straw Cutters, Plows of all kinds, Horse Rakes, Cradles, Churns, Cheese Presses, Cultivators, Harrows, Shovels, Hoes, Forks, Scythes, &c., &c., apply at the above establishment.

August 1, 1847.

Just published, in one large octavo volume, illustrated with Twelve Plates, and over One Hundred other Engravings,—neatly bound in muslin—price $3.50—

THE HORTICULTURIST, and JOURNAL OF RURAL ART AND RURAL TASTE, Vol. I., by A. J. DOWNING, Esq., Author of "Landscape Gardening," "Designs for Cottage Residences," "Fruits and Fruit Trees of America," &c. This volume embraces,

I. Designs for Villas, Cottages, Country Houses, Ice Houses, Vineries, Gates, &c., &c., with 23 engravings, with Descriptions and Estimates, and Remarks on the Color of Country Houses.

II. Remarks on Landscape Gardening, the Seeding and Management of Lawns—Planting and Management of Hedges—Selection, Culture, and Description of Ornamental Trees, &c., &c, with 16 Illustrations.

III. The Description and Cultivation of Fruits and Fruit Trees, and the Treatment of the Diseases to which they are subject. This department embraces Figures and particular Descriptions of Apples, Cherries, Figs, Gooseberries, Oranges, Peaches, Pears, Plums, Raspberries, Strawberries, &c., with nearly 50 Engravings, mostly figures of Fruit.

IV. Description and Cultivation of select varieties of Flowering Plants and Shrubs, with 30 engravings.

V. Gardening in general, Botany, Entomology, Rural Economy, &c., &c.

It will be seen from this enumeration of the subjects embraced in this volume, that it is just such a work as is required by the rural population of our country, furnishing, as it does, the information, designs, suggestions, &c., necessary to enable our Farmers and Horticulturists to erect tasteful and convenient residences and out buildings, and to beautify and adorn them with lawns, ornamental trees and flowering shrubs and plants, and to furnish them with the choicest varieties of Fruits and Vegetables the year round. ☞ Copies of the first volume, stitched, can be sent by mail—Price, $3—postage 37½ cents.

The second volume of "THE HORTICULTURIST" is now in course of publication, each number containing 48 pages octavo, embellished by a plate, and numerous other engravings. Terms, $3 a year. Published at the office of "THE CULTIVATOR," Albany, N. Y., by **LUTHER TUCKER,**

and for sale by M. H. NEWMAN & Co., 199 Broadway, New-York—J. BRECK & Co., 52 North Market street, Boston—and by G. B. ZIEBER & Co., Chestnut-street, Philadelphia, by whom subscriptions are received for the second volume.

SUPERIOR SOUTH DOWNS FOR SALE.

THE subscriber offers for sale two superior full blooded *South Down Bucks*. They can be sent to any part of the country, via Housatonic railroad. Address **H. B. GLOVER**, Newtown, Ct.

Sept. 1.—1t.

SEED WHEAT.

THE celebrated White Flint, Hutchinson, Red-Chaff, and Blue Stem wheat for sale. The above are winter varieties, and are considered the best now grown in New-York.

Seed rye, also, and Buckwheat, together with a general assortment of field seeds of various kinds, on hand.

A. B. ALLEN & Co., 187 Water-st., N. Y.

August 1—2t.

GRASS SEEDS.

TIMOTHY, Red-top, Rye-grass, and Blue Grass, Furze Top, Red and White Clover Seed, of the best quality, for sale by

A. B. ALLEN & Co., 187 Water-st., N. Y.

August 1, 1847.—2t.

FOR SALE.

A FEW very superior Paular Merino sheep—very heavy shearers, and of fine quality; 25 yearling bucks, large and likely, of long staple, and very thick wool. Also, from 50 to 75 ewes, from one to four years old, that are nice, and cannot be matched in the state. For further particulars, inquire of the subscriber a Newport, R. Island. **JOSEPH I. BAILEY.**

July 1—3t.

DRAINING TILE,

MADE, and for sale by **JAMES CHAPMAN.**

Enfield, Ct., July 1, 1847.—3t.

A VALUABLE FARM IS FOR SALE

IN Windsor, Vt., containing upwards of 400 acres of land, comprising tillage, grazing, and woodland in due proportion. It is situated on the banks of the Connecticut river, near the village of Windsor, and also near the eastern terminus of the Vermont Central railroad, and is well provided with suitable buildings, among which is a beautiful English cottage, recently built. The farm is in a fine state of cultivation, and in point of capacity for improvement, and convenience, and beauty of situation, is unsurpassed in its own beautiful valley. **SAM'L H. PRICE**, Agent.

Windsor, Vt., Aug. 1, 1847.—3t.

PROUTY & MEARS' PLOWS.

THESE celebrated plows are warranted, and the money will be returned for every plow that does not suit. Hon. Dixon H Lewis, Senator from Alabama, said, at the Farmer's Club in New-York, "My corn crop declined from 70 bushels per acre to 40; I sent north and got one of Prouty's plows, and now have the best crop within 50 miles."

The subscriber is sole agent, and offers for sale an assortment of the above plows, as also a general stock of agricultural Implements. **SAMUEL C. HILLS**, 189 Water-street, N. Y.

New-York, August 1, 1847—3t.

SALE OF SHORT HORNED CATTLE.

IN consequence of being overstocked, I will sell at auction, at my residence in the town of Auburn, on Wednesday, 8th of September next, forty head of thorough-bred Short Horn cattle; consisting of about thirty cows and heifers, and ten young bulls. I shall select from my whole herd, one bull, ("Symmetry,") two cows, and two heifers, which I shall not offer for sale. The remainder of the herd, being about forty, will be sold *without reserve*. The original cows of this herd were selected from the best of the herds of the late Patroon, S. Van Rensselaer, Francis Rotch, Esq., and L. F. Allen, Esq., whose reputation as breeders of fine stock requires no comment from me. The younger stock were reared with much care from my bulls "Archer" and "Symmetry," both of which have received the prize for the best Short-Horned bull, at the Exhibitions of the New-York State Agricultural Society. Archer was bred by Francis Rotch, Esq., of Butternuts, out of his famous imported cow "Adaliza," and got by Rolla. [See Coats' Herd Book, No. 4991.]

"Symmetry" was bred by Geo. Vail, Esq., of Troy, out of his cow Dutchess, and got by his Duke of Wellington,—[see Coats's Herd Book, No. 3654, or American Herd Book, No. 55,]—both of which he imported from the herd of Thomas Bates, Esq., of Yorkshire, England. Full pedigrees will be printed and ready by the 1st of July, to be had at the offices of the American Agriculturist, Cultivator, and Agricultural Rooms, Albany, Genesee Farmer, Rochester, L. F. Allen, Black Rock, or at my residence.

I will also sell ten three-fourths and half bred cows and heifers.

After the sale of the above cattle, I will sell at auction one hundred Merino rams, 10 to 15 South Down rams, Sixty Merino, and thirty grade Merino ewes—the ewes to be sold in pens of three.

That gentlemen not acquainted with my flock of sheep, may form some opinion of their nature, I make the following statement, viz:—

I have taken five clips of wool from my sheep; the clip of [illegible] averaged a fraction over four lbs. per head; this was the largest. One of the five clips I sold at thirty-nine cents. The other four I sold to one manufacturing company, at different times, at [illegible] cents per pound, *all at my own house*.

Terms of sale, *cash* or approved endorsed notes, payable at the Bank of Auburn, at three months, with interest.

J. M. SHERWOOD.

Auburn, Cayuga Co., N. Y., July 1, 1847.—3t.

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks and ewes—of undoubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk. R. J. JONES.

Cornwall, Vt., June 1, 1847.—tf.

PURE BRED RAMS.

THE subscriber has a few choice rams for sale, bred from the celebrated flock of Geo. Flower Esq., of Albion, Illinois, and some from a Saxon ram imported by Henry Clay, Esq., of Ashland, Kentucky. These sheep are of fine healthy constitution, with a very fine long staple.

He has also added to his flock 20 ewes and rams, selected from the flock of Samuel Patterson, Esq , of Washington Co , Pa. These sheep are not surpassed by any in America; [see the communication of L. A. Morrell, Esq., Cultivator for Nov. 1846,] their wool having been sold last year in Northampton, Mass., at 75 cts.

He has also a few fine young Shepherds' Dogs, bred from a Scotch cully, imported by Mr. Mitchell, of Lasalle Co., Ill.

A. H. NICHOLS, Greencastle, Putnam Co., Ia.

August, 1, 1847—4t.

HORSE POWERS AND THRESHERS.

THE attention of farmers is invited to Wheeler's Patent Horse Powers, an engraving and description of which is given in the Cultivator for Feb., 1847. Among the advantages of this power are its compact size and lightness, and the ease with which sufficient speed can be obtained for threshing, without gearing, and consequently greatly lessening the friction. It will be found a great labor-saving machine, as it may be attached to Threshing Machines, Circular Saws for sawing, Straw-Cutters, or any other machine which it is wished to impel by motive power. Price, for single horse power, $75—for two horses $95.

Also, Wheeler's Spike Thresher, with a cylinder of 14 inches in diameter, and 22 inches long, with the concave filled with spikes on the upper side, thus avoiding accidents by preventing stones or other substances getting into the Thresher. Another advantage of this Thresher is, that it scatters the grain much less than many others. Price, $28—with Separator attached, $35. The Separator divides the straw and grain, by a shaking motion which it receives from a crank attached to the Thresher, thus saving the work of one or two men with rakes.

With this Horse Power and Thresher, 200 bushels of oats, or 100 of wheat may be threshed per day, with a change of horses.

The above machines constantly on hand at the Albany Ag. Warehouse and Seed Store, No. 10, Green-street.

June 1, 1847. LUTHER TUCKER.

GENEVA AGR'L FOUNDRY AND SHOPS.

THE subscriber has recently put in operation a new FOUNDRY AND MACHINE SHOP, intended chiefly for the manufacture of AGRICULTURAL IMPLEMENTS. A number of valuable improvements in various farming tools having been made and patented by his predecessor, (T. D. Burrall,) this establishment has been erected for the manufacture of *these* and such other implements as the market may require, and in order that purchasers may depend upon a genuine and well finished article. Among other things he has now on hand

Burrall's Patent Threshing and Clover Machines and Horse Powers

" " Shell Wheel Plows, greatly improved the present season.

Burrall's Patent Corn Shellers, Nos. 1 and 2. do. do.

Also, Subsoil, Corn, and Shovel Plows, Straw Cutters, of various kinds, Scrapers, Plow Points, Trimmings, &c., &c.

He intends adding to his present stock from time to time, by selections from the best articles in market; all which will be got up in the best style, and sold, wholesale and retail, on reasonable terms.

Mill Gearing, Castings of all kinds, pattern-making, &c., &c., executed on short notice. E. J. BURRALL.

Geneva, August 1, 1847.—4t.

A BOOK FOR EVERY FARMER.

8,000 sold in Six Weeks.

JOHN P. JEWETT & Co., 23 *Cornhill, Boston,*

HAVE just published one of the most valuable works for farmers ever issued from the American press, entitled

THE AMERICAN VETERINARIAN, or DISEASES OF DOMESTIC ANIMALS,

showing the causes, symptoms, and remedies, and rules for restoring and preserving health by good management, with directions for training and breeding. By S. W. Cole, editor Agricultural department Boston Cultivator.

Mr. Cole has spent several years in compiling and testing the facts he now offers to the farmers of this country. He has produced a work of great value to every man who keeps but a single horse or cow, but to the practical farmer its value can hardly be over estimated. The whole subject of the *Treatment of Domestic Animals*, is treated in the most thorough manner, comprising the Horse, Ox, Cow, Sheep, Hogs, Dogs, Hens, Turkeys, Geese, Ducks, Birds, Bees, &c., &c. The whole is compressed into one volume of 288 closely printed pages, with 7 beautiful wood engravings, firmly bound in leather. To be sold at the low price of 50 cts., in order to bring it within the means of every man. No pains or expense have been spared on the part of the author or the publishers, to produce a work worthy a place in every Farmer's library.

For sale at the office of "THE CULTIVATOR," and at the principal Book and Agricultural Stores in the country.

JOHN P. JEWETT & Co.

PRINCE'S PREMIUM STRAWBERRIES.

WM. R. PRINCE & Co., Proprietors of the Nurseries at Flushing, will transmit their catalogue of strawberries and other fruits to those who do not possess it. The assortment is imcomparably superior to any other, and comprises the choicest varieties, which are no where else obtainable, many of which are offered for the first time. Orders enclosing the amount, (not less than $5.) will be promptly executed and forwarded as desired. August to October are best for planting strawberries.

Flushing, L. I., August, 1847—2t.

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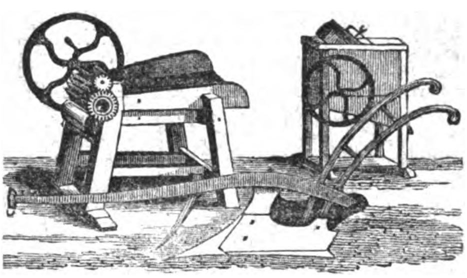
The undersigned, having purchased the above patent right for the United States and Territories, excepting the states of New-Jersey, Delaware, Maryland, and the cities of New-York and St. Louis, invite the attention of the public to an examination of the scientific principles upon which the above invention is based, as well as its practical utility. For a particular description of the Preserver, see the Cultivator for July, 1847, page 217. They offer for sale patent rights for the construction and use of the Preserver, by states, cities, counties, towns, or individual rights, upon terms that will induce all interested in the growth or sale of fruit and vegetables; also dealers in butter, eggs, or in the curing and preservation of meats, to purchase rights and construct houses.

All desirous of a farther knowledge of the operations of the preserver, can see one in operation, either by calling upon P. Kephart, Western Hotel, Baltimore, Md., who is our authorized agent, or upon the subscribers, Coats-st. Wharf, near Fairmount, Phila.

All communications will receive prompt attention if addressed either to P. Kephart, Baltimore Md., or FLACK, THOMPSON & BROTHER, Spring Garden P. O., Philadelphia, Pa.

Jul 1—tf.



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Pitts' Corn and Cob Crusher. Price, $40
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Minor & Horton's Plows, all k'ds;
Worcester Eagle do.
Mayher & Co.'s Eagle improved Plows;
Mayher & Co.'s much approved Plows;
Langdon's Horse Hoe Plows;
Castings to fit all kinds of Plows in use;
Mayher & Co.'s 2 Horse Power, Price, $55
do. do. 4 do. $75
do. do. 2 Thresher, $25
do. do. 4 do. $30
John Mayher & Co.'s First Premium Corn Sheller;
Burrall's Corn Sheller;
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Pitt's Horse Power and Threshing Machine;
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Gin Gear, Segments, Rag Wheels, &c.

Castings of all kinds made to order. **March 1, 1847—tf.**

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AYRSHIRE BULL FOR SALE.

THE subscriber has for sale a fine imported Ayrshire bull, warranted equal if not superior to any animal of the breed in this country.

He was selected without regard to price, by an excellent judge,—an Ayrshire dairy farmer, and previous to importation he took the first prize at two successive exhibitions of that county.

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If not previously disposed of, he will be shown at the Provincial Exhibition at Hamilton, Canada West, on the 6th of October next, and will be sold to the highest bidder. For particulars apply to

JAMES DOUGALL.

Rosebank, near Amherstburgh, C. W., August 9, 1847—1t.*

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JAMES DOUGALL.

Rosebank, near Amherstburgh, C. W., Sept. 1, 1847.—2t*

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JOHN OGDEN DEY.

Sept. 1, 1847.—1t.

AMERICAN EGG HATCHING MACHINE.

Patented Feb. 20, 1846.

AFTER 15 months of practical demonstration, the subscriber is enabled to present the above machine to the public with confidence, as an auxiliary to the wants of the farm-house. It is so simple in its construction and management, that a child can in a short time superintend its operations, with about an hour's attention during the day; and it requires no care after bed-time. Alcohol, or other high wines, is found to be the *cheapest* and cleanest fuel, and by repeated trials, the average expense of this kind of fuel does not exceed a quarter of a cent an egg, for the full term of twenty-one days. The chickens produced are healthy and strong, and their fine appearance has been the subject of general remark, among the many visitors (now) attending Saratoga. Full printed directions and explanations accompany each machine. The machines are durable, and can be sent with safety through any of the ordinary channels of conveyance.

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No, 1,	containing between	250 and 300 eggs,..	$20 00
" 2,	" "	500 and 600 " ..	30 00
" 3,	" "	800 and 1000 " ..	40 00

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Reference, Editors of Cultivator. L. G. HOFFMAN

Albany, Sept. 1, 1847—2t.

AGRICULTURAL WAREHOHSE.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of AGRICULTURAL IMPLEMENTS, of the most approved patterns.

PLOWS, adapted to every variety of soil, embracing nearly 150 different patterns and sizes, among them the PREMIUM PLOW, for which he was awarded the silver cup, at the Fair of the American Institute, in Oct., 1846.

Moore's Premium Plow, which for general purposes has no superior.

Freeborn & Hitchcock's Plow, a good article, very extensively used at the south.

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Prouty & Mears' " " "
Sub Soil " " "
Two and three furrow "
Side Hill and Double Mould "
Cultivators, with steel and cast shares.
Harrows, plain and double hinged.
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Mills for Grinding Grain, Corn and Cob Crushers.

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Also on hand and manufactured to order, every description of Brass, Copper, and Iron Wire Cloth, Sieves, Screens, Riddles, &c. all of which will be sold on the most favorable terms.

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Sept. 1, 1847.—1t.

MANAGER WANTED,

TO take charge of a wheat, corn, and clover plantation in North Carolina. None need apply but with the following essentials. Good recommendations, a practical familiarity with modern principles of agriculture, activity and energy in forwarding the owner's interests. Salary from $200 to $350, exclusive of a house, one servant, horse to ride, and support from plantation supplies, such as flour, meat, meal, &c. An intelligent Scotch farmer, with small family, preferable. Apply to the Editor of Cultivator, or to

Sept. 1—tf. H. K. BURGWYN, Halifax, N. C.

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, OCTOBER, 1847. No. 10.

PEAT OR MUCK FOR MANURE.

PEAT, or "muck," may be described as vegetable matter in a state of decay. Its origin is somewhat various, being sometimes derived from the branches and leaves of trees, and sometimes from mosses and aquatic plants. It is not found in so large bodies in this country as in the British islands. It is quite common in England and abundant in Scotland; while in Ireland it includes large districts, and even extends up the sides of mountains, covering the earth to the depth of forty to fifty feet, and, by computation, embraces nearly a seventh part of the surface. In those countries it constitutes the fuel of a large portion of the population. That which is used for this purpose, is formed chiefly by mosses, which for ages have continued to grow on these localities. Persons who are acquainted with peat bogs or mosses, understand the process of accumulation; others may not so readily comprehend it. There is a continuous growth from year to year, but the under strata die, are more or less decomposed, sink down, and by pressure are converted into the state which is called peat. We have but few bogs in which peat of so solid a nature as that used in Ireland for fuel has been found. But in some instances our bogs have been dug for the purpose of procuring fuel, to good advantage.

The greatest value of bogs in this country, however, consists in their affording *manure*. We shall enter into no particular discussion, at this time, in regard to the specific operation of peat or muck in benefitting vegetation—whether its action is wholly mechanical, producing in the soil the requisite physical texture, or whether the substance is actually "dissolved" and absorbed by growing plants—its utility in augmenting the yield of various crops, has been abundantly demonstrated.

It is, perhaps, proper to make a distinction between peat and muck, though the terms are frequently used synonymously. Peat should be considered as referring more particularly to the composition of bogs, and which has become so solid that when it is cut in pieces they will retain their form; and muck to the loose matter which has been accumulated from leaves, or the washings of woods and fields.

The value of these substances as manure, especially for immediate use, varies greatly, according to their origin. The muck found in ash, maple, or elm swamps, or which is formed by the leaves and small branches of hard-wood trees, is usally far better than that found in pine, cedar, or hemlock swamps, or in legitimate peat bogs. The former will generally produce excellent effects on most crops as soon as it is applied; the latter must have time for decomposition, and generally requires to be mixed with some substances which will assist the development of its fertilizing qualities. It is frequently remarked, that muck from the localities last mentioned, is *sour;* and chemical investigation has shown that it does in fact contain an acid, which is called *tannin*. The bark of oak, and of most hard wood trees, contains this principle; but when the bark or trees decay, the acid is soon dispelled by the action of the air and rain. With the remains of resinous trees, such as pines, cedars, &c., it is not so. Either from the acid being combined with resin, or from some other cause, it is much less soluble; and muck which is mixed with the rubbish of these trees, produces at first rather injurious effects. The refuse of wood-piles, composed of chips and bark chiefly from pine, is sometimes applied to land as manure; but the yellow color and stunted appearance of vegetation in such cases, shows that the application was rather poisonous than beneficial.

In many situations, we believe that the substance of swamps and bogs constitute the best and cheapest material which can be used, to a certain extent, for enriching the soil. Its application is attended with the greatest benefit on such lands as contain least vegetable matter; and it so happens, fortunately, that those portions of the country which are most deficient in this respect, are generally best supplied with the article to which we refer. The question is, how can it be used to the best advantage? We have before remarked that some kinds of muck operate beneficially as soon as they are applied, and without admixture with any other substance. Such, however, is not very abundant, and with that which is ordinarily met with, the case is different. The acid must be got rid of, and the vegetable food which the peat or muck contains, rendered soluble. There are several ways in which this article may be usefully compounded, some of which are the following:—

1. Composted with animal manure. This mode has been practiced more or less for many years. Lord MEADOWBANK's experiments, more than forty years since, proved the value of peat compost. He found that any substance which would occasion a fermentation of the peat, would render it good manure; but stable or barn-yard manures were mostly used. He found that one load of manure would ferment three loads of peat; but it is evident that the proportions must vary, according to the strength of the manure and its tendency to heat, and the *sourness* of the peat. The peat and manure are laid in a pile, in alternate layers. It is best to dig the peat in autumn, when the bogs are usually driest. The compost may be formed

in spring, and will ferment sufficiently to be used for crops in three or four weeks, according to the state of the weather—the change being, of course, most rapid in a high temperature.

Elias Phinney, Esq., of Lexington, Mass., one of our most judicious farmers, has ascertained that a cord of green dung will convert twice its bulk of peat into manure of equal value to itself.*

The beneficial action of the manure in this case is ascribed to two causes. The ammonia of the manure being an alkaline salt, neutralizes the tannin, and the heat, in connexion also with the ammonia, renders the vegetable nutriment of the peat soluble. It is undoubtedly one of the best modes in which the farmer can use peat or muck. But he should never lose sight of the importance of using a sufficient quantity of muck in his stables and yards, to absorb and prevent the waste of all liquid manure.

If vats or reservoirs are formed for the reception of urine, the liquid may be used with excellent effect on peat. Urine is richer in ammonia than dung, and its action on peat is consequently more powerful. **Cheever Newhall**, Esq., of Dorchester, Mass., prepares large quantities of peat in this way, and considers a cord of peat saturated with a hogshead of urine, more valuable for any crop, than a cord of any kind of dung made on the farm.

2. Doctor **Dana**, in his *Muck Manual*, observes that—"the power of alkaline action is alone wanting, to make peat good cow dung,"—that "by the addition of alkali to peat it is put into the state which ammonia gives to dung." The effect of alkali is undoubtedly similar to that of the ammonia of manure. Its chief value probably consists in its neutralizing the acid of the peat, though, as Dr. D. observes—"the solubility of geine [vegetable mould,] is wonderfully increased by the action of alkalies."

Of the alkalies to be used, Dr. **Dana** gives the preference to wood-ashes, soda, (or white ash,) and potash; and the proportions in which he recommends these substances to be used, are—for a cord of peat, 16 to 20 bushels common house ashes, or 92 lbs. of pot or pearl ash, or 61 pounds of soda. The alkalies to be dissolved, and the solution applied to the peat in layers, as the heap is being made up.

Leached or spent ashes may be used instead of the articles above named, but the quantity must be proportionately greater. Dr. **Dana** refers to **George Robbins**, of Watertown, Mass., who used for four years no other manure than one part of barilla spent ashes to three of peat, mixed together. The peat was dug in the fall and mixed in the spring. Mr. R. kept eleven horses, four cows, and one hundred hogs, but sold all their manure, and used only the compost on his land, which was a sandy loam. The effects are said to have been excellent, Mr. R.'s crops being equal or superior to any grown round him.

The "salt lye" from soap-boiling establishments, and soap-boilers' waste of every description, can be used with great advantage in the preparation of peat.

Dr. **Dana** greatly prefers ashes, or the articles above named, to lime. He does not, he says, "go for lime, but for soluble alkali. Carbonate of lime alone is not expected to produce immediate results, and seldom has, nor can be expected to produce visible effects in the first year of its application. * * * Alkalies and peat or swamp muck, are within the command of almost every farmer. Lime is not [always] within reach, and besides, requires no small skill in its management."

Dr. D., however, recommends that experiments be made with what he calls a "soluble salt of lime," which is prepared by mixing lime with salt. He advises the manufacture of a compost as follows:—

"Take one bushel of salt and one cask [four bushels] of unslacked lime. Slack the lime with the brine made by dissolving the salt in water sufficient to make a stiff paste with the lime, which will not be quite sufficient to dissolve all the salt. Mix all the materials then well together, and let them remain together in a heap for ten days, and then be well mixed with three cords of peat; shovel well over for about six weeks, and it will be fit for use."

Twice turning the heap over would probably be sufficient. The cost of this compost,—reckoning the peat at fifty cents per cord in the bog, and charging one dollar per cord for digging and carting it, the salt at sixty cents per bushel, the lime at one dollar and twenty cents per cask—would be $6.30 for three cords, or $2.10 per cord. In general, however, the peat would be of trifling value before it was dug, which would make the cost of the compost less.

3. The mixture of peat with animal bodies, where they can be obtained, forms a compost of the most powerful kind. In some instances, slaughter-house offal, fish, the carcasses of horses, and other animals, may be obtained with little or no expense. They should be at once surrounded by peat, if that substance can be had—if not, vegetable refuse and earth will absorb the gases which are disengaged by putrefaction. Dr. **Dana** says, "it has been actually proved that a dead horse can convert twenty tons of peat into manure more lasting than stable dung." Without vouching for the absolute correctness of this rule, the writer can say that his own experience has convinced him of the great value of animal matters in preparing peat for manure.

4. When the substances above named cannot be obtained to advantage, *charring* peat has been found a useful process. Peat and peat rubbish, such as tussocks, and turf mixed with the roots of bushes, may be either burnt, and the ashes spread on land, or they may be only partially reduced by fire, so as to admit of their being used for manure. Clear peat may be charred in large quantities at a small expense. The peat should be first partially dried; then a fire may be kindled, and the lumps of peat gradually placed round. When the fire is fairly kindled, it should be kept in a smothered state, because if it breaks out in a blaze, it will reduce the peat to ashes, instead of leaving it in a charred or half-burnt state. Two hundred bushels of this peat charcoal per acre, is considered equal to a dressing of ten to fifteen tons of yard manure. This, however, no doubt depends much on the quality of the peat. The heat which the peat goes through, dissipates its acid, and reduces it to a pulverized state, in which it benefits vegetation immediately.

Income from Poultry.—It is stated in the report of the committee on fowls, made at the last Worcester (Mass.) Cattle Show, that **Eben Lincoln**, of Grafton, from 27 fowls, in seven months, obtained 199 doz. eggs, which sold for $28; and 92 chickens sold for $23; total. $51—besides 29 doz. eggs used in his family. The food of the fowls was, "some meat, some fish, all kinds of grain, some lime, or pounded shells, enough sand and water, a warm dwelling, and good roosts." Reckoning the 29 doz. eggs which were used in the family at 14 cts. per dozen, (the price which those sold brought,) the whole income from these 27 fowls in seven months, would be a fraction over $55.

Value of Reading.—A Chilicothe paper says, "We know a man who engaged his wheat, (600 bushels,) at $1.12½ cents per bushel. His neighbor, who had a like amount, engaged his a few days afterwards at $1.00 per bushel, getting for the same amount $75 less. The former read the agricultural intelligence—the other did not, and lost enough to pay for a paper a lifetime.

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* Dana's *Muck Manual*.

FAIRFAX COUNTY LANDS—EMIGRATION TO VIRGINIA.—No. II.

HAVING in the March number of the Cultivator, given your readers some of my " first impressions " of this portion of Virginia, with a promise to resume the subject on a future occasion, I avail myself of a leisure hour to fill up in some measure the imperfect sketch then furnished, as well as to reply, through the medium of your valuable and widely circulating pages, to the numerous inquiries which have been addressed to me from nearly every section of the union, in reference to the facilities here afforded for agricultural emigration and settlement. A longer residence in, and a more intimate and familiar acquaintance with the advantages and disadvantages of this section, in regard to the principal objects which impel northern and eastern men to seek its soil, enables me, I trust, to speak more confidently of the various inducements which it presents in this point of view. The fact, moreover, of which I am not unaware, that several very worthy and intelligent persons, have within a few years past removed hither from the north, and failing from a variety of unforeseen circumstances to realize the expectations held out to them, have returned, with anything but a favorable impression of the country, presents an additional inducement to a faithful exposition of the state of things here, so far, at least, as it may be within my power to give it.

The peculiar *advantages* which the enterprising and industrious northern agriculturist may reasonably calculate upon, from an emigration to this portion of Virginia, consist, first, in the low price and intrinsic value, for all ordinary agricultural purposes, of the land, situated within half a day's ride of Washington, Alexandria, or Georgetown, three of the best and most reliable markets for farming produce of every description to be found in the union. The greater portion of these lands have, at no very distant period, been subjected to an exhausting process of cultivation, by the owners and occupants of large plantations, and subsequently abandoned for more fertile fields; and the soil, consisting chiefly of a clayey loam, being naturally rich, and left to its own resources for a succession of years, regaining all its elements of fertility, with no other drawback than the luxuriant surface growth of pines and evergreens, requires only the judicious application of a little labor and capital, to restore it to its original value. The unbiassed testimony of competent and disinterested judges will bear me out in the assertion, that numerous farms, of from one to five hundred acres, within 30 miles of the Washington market, which have been purchased at five, ten, and fifteen dollars per acre, are, in all essential respects *fully equal in intrinsic value to northern farms which command without difficulty from forty to sixty and seventy dollars.* They are equally susceptible of profitable cultivation—require no greater outlay of capital and labor to the production of equal and often of superior grain and grass—are equally well adapted to the growth of wheat, rye, oats, barley, corn, potatoes, turneps, and all other vegetables suitable for market or family consumption—afford far greater facilities for the cultivation of fruit of every description—and are much better adapted from the mildness and benignity of the climate to the raising of all kinds of stock. They are liberally supplied with timber of the best quality—oak, walnut, locust, chestnut, maple, cedar, and pine—abundantly furnished with water—and deficient only in buildings, fences and other improvements, the result of active cultivation. The frequent consequence of this state of things, has been the inconsiderate investment, by many of the northern emigrants, of all or the principal portion of their available means in the purchase of these cheap and valuable lands, in quantities greater than was at all requisite for ordinary or profitable farming operations, with the view, either of future speculation, or ultimate occupation, and provision for their families—leaving themselves virtually without the means either of making those improvements and bestowing that cultivation upon the land which alone could adequately call forth its resources, or of meeting those current expenditures for the support of their families necessarily incidental to the first year or two of a new settlement, and which cannot, in the nature of things, be expected from their first experiments in the cultivation of the soil. Hence arises one great source of disappointment and failure; and after a few years' struggle, the improvident adventurer, having parted with all his capital in the purchase of his land, and finding himself unable to make the necessary improvements, and at the same time to derive a comfortable subsistence for himself and his family from the proceeds of his farm, abandons the undertaking in disgust, and perhaps returns to the north, with a melancholy description of the barren and worthless soil of Virginia. Had he reserved a suitable portion of his pecuniary means, for the gradual improvement of this land and the current expenditures of his family, a far different result would have ensued.

2. The *healthiness* of the climate, attributable in a great measure to the uniformity and benignity of its temperature, and the mildness of the winters, constitutes another important attraction to the northern emigrant. But from this very circumstance arises another very prevalent source of disappointment. The only disease which may be regarded as peculiar to the climate, is that familiarly known at the west as *fever and ague*, and here softened down into the appellation of the *chills*. The vicinity of rivers and streams of water, accompanied by imprudent exposure to the morning and evening exhalations, produce, more frequently during the decay of vegetation at the close of summer and beginning of autumn, those disagreeable consequences which are attendant upon similar causes everywhere else; and the robust emigrant, whose active energies are periodically prostrated by this unwelcome visitant speedily connects his untoward fortune with the soil itself and imbibes a thorough distaste for his " new home." Now it requires but a moment's reflection to perceive that not the slightest *necessity* exists for that degree of exposure which here, as elsewhere, induces disease—that healthy locations abound—that no situation or condition is exempt from liability to those chronic or local maladies which seem inseparable from humanity—that even *fever and ague* is preferable to *pulmonary consumption*, for which it is, with us, to a very great extent, a substitute—and that ordinary prudence and attention to the laws of health, will, in nine cases out of ten, operate as an infallible preventive to the attacks of this insidious foe.

I have now briefly alluded to the principal causes which have, in many instances, combined to render a permanent residence in this section of country distasteful and virtually impracticable. Regarding them as I do, as by no means formidable, when properly understood and intelligently guarded against, in the genial mildness, and benignity of the climate, the natural fertility of the soil, and its adaptation to the various crops desirable to the practical agriculturist, the proximity to a steady and permanent market, at which all the productions of the farm and the garden may readily and promptly be exchanged for amply indemnifying prices, the length of the season during which cattle and stock of every description may find their own support, independent of the special care of the husbandman, the presence of all those elements of civilization and comfort, which the vicinity of a large capital and its suburbs can afford, and of a society than which none in America or Europe can be superior—in these, and amid those associations of rural beauty, grandeur and sublimity which abound on every hand, it surely cannot be difficult to find all those sources of enjoyment and of individual and social well-being which render the cultivation of the soil—the noblest employment of humanity—a luxury and a pleasure unsurpassed, at least, if not unequalled in any other portion of the Union. S. S. R.

Lake Borgne Place, Prospect Hill, Va., Aug., 1847.

MICHIGAN AS AN AGRICULTURAL STATE.—No. III.

Timbered Lands of Michigan.—It has been already stated that nearly all the border counties of the peninsula, and considerable tracts in the interior, may be designated as timbered lands, in distinction from the openings, plains, and prairies, already described. These border tracts are underlaid by thick deposits of yellow and blue clay, the extent of which conforms nearly with the characteristic growth of timber above mentioned, and it will also be generally found that the timber tracts, wherever they occur, have a foundation or subsoil of clay. These blue and yellow clays are of a marly character, and highly fertile, but as they do not readily absorb the rains, the soils, where constituted of them, are more cold and wet, and less adapted to wheat than the porous, dry soils, described in my last communication. In general, however, these clays have a covering of gravel and sand, of the same or similar character to those there described, and varying in depth from a mere covering of a few inches, to many feet. Throughout most of the eastern border counties, the slight depth of the latter allows the clay greatly to influence the soils; so that, in connection with the plane surface, origin is given to some extensive swampy lands. These, in the early history of the country, when nothing was known beyond them, gave an unfavorable impression abroad of the whole state.

The timbered tracts in general, and particularly on the western side of the peninsula, are of a very different character. They consist of fine rolling tracts of sugar maple and beach, with intermixture of whitewood, black walnut, white ash, oak, elm, and white pine; the soil being a deep gravelly loam, resembling that of the openings. In the early settlement of the state, the openings and prairies were usually first selected, because of the ease with which they could be brought into crops, and from the admiration excited by their beauty and singularity. Since the timbered lands have become better known they have been found to possess some advantages over the openings, besides being, in many respects, decidedly superior to most of the timbered lands of the eastern states. These advantages I will endeavor to sum up as briefly as possible.

The soils are of more lasting character than those of the openings, not commencing to degenerate until after much cropping. They are better adapted to the cultivated grasses, which do not flourish well on the dryer soils of the openings. These timbered lands are easily cleared, there being but little underwood, and a large proportion of the timber being clean maple and beech, often sufficiently open to admit a team to be driven through the woodland without much difficulty. Some of the lands are not more densely wooded than what are called "timbered openings."

Slashing is done for $1.50 per acre, after which the tops are burned, and a crop got in among the logs, which are allowed to become thoroughly dry, and are then consumed. This first crop is often as large as that obtained elsewhere after the most thorough improvement. The whole cost of clearing complete may be estimated at from $6 to $10 per acre. No "breaking-up team" is required, and the work may be proceeded with by those who have only their hands for capital. It has become an extensive practice, for the past few years, to collect the ashes produced by the burning, which are found, with little additional trouble, to pay the whole cost of clearing.

As the sugar maple is abundant, this source of profit is also extensively resorted to, and adds much to the gains as well as comforts of the farmer, without withdrawing his labor from the ordinary operations of agriculture.

The *pine* of this region generally occurs intermixed with the maple, beech, and other hard timber, and is of the very largest size. It is to be remarked that where pines are found under these circumstances, they are not only superior to those which grow in the "pine districts," so called, but are not, like the latter, indicative of a light soil. On the contrary, they flourish here upon strong sandy or gravelly loams, which are capable with ease of the highest degree of cultivation. An acre will frequently contain from five to thirty of these trees, and, as mills are not wanting, any one of them is often worth to the settler more than the cost of the acre that produced it.

This country is abundantly supplied with springs and water-courses, varying in size from considerable mill streams to small but permanent rivulets, which are seldom or never marshy. Fine lakes, well stocked with fish, are also numerous; so that during a very dry summer, the inhabitants never suffer from destitution of water, as is sometimes the case on the openings and prairies.

The soil of this region, and its undulating surface, are well adapted for dry and permanently good roads. It is also decidedly a wheat soil, easily tilled and very productive, yielding from 20 to 40 bushels per acre. I except, of course, those timbered lands which have a decidedly clay soil, and which are best adapted to pasturage. All the large streams have rich bottoms, which yield the most abundant crops of maize, oats, and potatoes. The black walnut on these bottoms frequently attains to 18 feet in girth.

Every year is giving increased importance to the timbered lands of this state, and when we reflect that the majority of immigrants are from education and habit accustomed to timbered districts, and consider the advantages possessed by the one here described, in durability of soil, ease of tillage, privileges of markets, water, mills, and lumber, and the comparative cheapness of the lands, I feel convinced that the day is not distant when they will rank with the best settled and best cultivated portions of our country.

I shall here close my observations, remarking that, as I have confined them strictly to the agricultural relations of the state, some topics have been omitted which I would gladly have dwelt upon. Prominent among these is the school fund of the state, which affords the benefits of education to the poor equally with the rich. As your motto is "the improvement of the *mind*," as well as "the soil," this brief allusion to one of the most distinguished advantages of Michigan, may not at least be inappropriate.

B. Hubbard.

Detroit, Michigan, 1847.

NOTES ON THE CULTIVATOR FOR JUNE.

Eds. Cultivator—Whilst taking the shade, I have perused your June number, and like unto the rest, it is "worthy and well qualified." I am tempted to make some remarks on the various articles embraced therein, and on other subjects brought to mind by its contents. With no unkindness do I write, and only desire the good of the parts and the good of the whole.

"*Breeding Horses, No.* 1."—Having had some of those high bred stock for years, and knowing their worthlessness for the plow or the saddle, I beg no one to try more than one. A dash of blood in a saddle, harness, or plow horse, is to be wished for. Some one must therefore keep the pure breed; let it be those who need not all their stock for use. I am breeding my mares to Jacks, and think from one trial that they cannot be excelled by the common stock. Preserve me from such "pure breds" as I have, Monsieur Tonson, John Richards, or ——.

"*Large pigs*," p. 173.—"*The pigs were all of one litter.*" "Two were nine months and twenty days old, and the other two were nine months and twenty-eight days old." A Yankee trick. [We do not understand our correspondent. Surely, he cannot mean that the statement of the four pigs being of one litter, is false, because they were not all killed at one time.—Eds.]

"*Soils which Run and Bake*," p. 174.—Our soil in this region, back from water courses, after the decayed vegetable matter has passed away, is of a yellowish cast, not analyzed that I know of, but is evidently not "pure clay." I think it contains more silex, with some vegetable matter. After a heavy rain, the water is of a dirty yellowish cast, not as from the red clays of Carolina; indicating a solution and mixture of the earth; this muddy turpid water will of course, where it runs not off, settle into the crevices and vacancies or hollows of the earth, and where the water is evaporated or percolates, the earth in mixture is deposited. The sun then bakes this mud into a hard crust. This is the soil here "which runs and bakes." The matter was laughed at when our worthy Eufaula brother, who has since departed this life—sweet be his repose—alluded to it in your paper. I forget who did allude to it, but "it is as true as preaching." To plow our clay lands in the fall will insure harder earth to plow in the spring than if it had not been done; because the plowing leaves the surface uneven, leaves vacancies, (no such thing as a vacuum, of course;) this uneven surface is melted by the rain and fills the crevices; the rain beats the earth, and the settling by weight of heavy rains, gives the hard earth; whereas, the surface settling by light rains and its own weight, forms a thin crust that admits water to pass through slowly and to run off rapidly.

"*Hydraulic Ram*," p. 180.—If somebody will send me one to put up at a neighbor's, so that people could see it be no humbug, I think they would sell at $25.

"*Salve for an inflamed sore*," p. 182.—No accounting for taste—honey and the yolk of an egg will be as certain to draw, especially, as many old women's prescriptions. I have known lard and ashes, lard and salt, used in castration. But don't call these remedies to allay inflammation. Simple applications are best; fresh lard as good as any.

"*Break the Crust*," p. 182.—Try it on cabbage. I generally get the start of my neighbors by this very plan, and tell them to stir often. A good steel rake is a good implement, better than a hoe.

"*Milking*," p. 183.—I have known a "darkie," over in the valley of the Mississippi, where we "outside barbarians" need so much enlightening, take a bucket of water and a towel to the "cup-pen," (cow-pen, Africanized.) I can assure Mr. or Mrs. Queens County, that one farmer's wife would get angry if her darkie dared to milk without using water and a towel.

"*Plan of a Barn*," p. 184.—I wish I could draw designs; I would give you a plan of a barn, on a certain plantation, where "*cotton are grown.*" May be you can have it done from the following. A lot fenced in, after the old Virginia fashion, about ten rails high, part of the rails with one end on the ground, a part with rails pushed out so as to be only upon the end of its under brother, a hollow log placed on short blocks, with one end several inches lower than the other, to keep corn from running out at the upper end, which has no closing; a sow crawling up into the upper end, with a half dozen shotes squealing near by, complaining, no doubt, of the "old un" for being their "illustrious predecessor." Down in one corner of the lot are several fodder stacks, with the blades pulled out from one side, which gives the "Grecian bend" to the upper works; the corn crib built of poles, and the roof weighted down with a similar product. Talk of barns! Sheer nonsense. Horses don't require protection in this country; the washing rains are intended by Providence to clean the stock, and the hot sun to dry them. Send a traveller here, to take notes for an agricultural "Cruikshank." I will show him many caricatures, that are true to life.

"*Corn in New-York*," p. 188.- About 22 bushels per acre! and New-York near the northern limits too! Don't let my Philadelphia brother chip, who vaunts so much about the northern limits see this. Why, sir, as sure as you are born, this county of Hinds, in this state of Mississippi, will put your state to the blush. There are five of one family connection in this western shady side of Hinds, that will beat you to death, and they are all pressing the cotton matter at that. I presume we have over 350 acres in corn, and I think our crop will not be short of 10,000 bushels, and with a fair season, it will run to 14,000. Out of 100 acres in a body, I will take 50 that will tip the beam at 50 bushels per acre. You can beat this, by bringing up your 20 to 100 wagon loads of manure, but our farmers would not know manure if they saw it; and as to work, two light hoeings, and two or three plowings, including sowing of peas, was the tale. Understand, this country is a cotton country. I know of no farm, large or small, where corn is the only product, and we will average some 25 bushels per acre. This for the south, where corn runs out, and watermelons become woody, will do to put against your poor country.

"*Hoeing or Cultivating Crops*," p. 189.—Press it, just publish this in every May number. It is "*multum in parvo*;" (pardon this foolery.) I mean *much* of great value, *in few words*.

"*The Orchard and the Garden*," p. 191.—Good again. Give those indolent, careless fellows another; old folks used to tell me "whipping was good for boys—it makes them grow." I say, give it these fellows under the ribs, friend T. I know many people who go to great pains in planting trees in a foot and a half hole, and leave them to cows, hogs, horses, and all else—grass, weeds, oats, and rye, not excepted. Lash them well.

"*False names to Apples*," p. 102.—Why not say to all fruits. I have been sorely annoyed, and by prominent nurserymen. I have a pear tree with the first pears now on it, planted here in 1832, the leaves about as large as your shillings, or our bits. I received the Red Cheek Melocoton, under two names, from the same nursery, as Lady Gallatin and Yellow Melocoton. Also Noblesse and Vanguard; Druid Hill, with globose glands; Catharine, with globose glands, and so on. Ought we not to have a resource on nurserymen who would thus take our dimes, and permit us to pay freight, cultivate, and lose the land for years, before we find out our error. Induce your legislature to pass a law making a penalty of ten times the cost.

"*Coating for Houses and other Buildings*," p. 194.—Is this a plaster to be spread with a trowel, or to be moulded into bricks, or mixed with water? About as satisfactory a recipe as was a Yankee apothecary's answer, to W. C. Preston, when asked in a court, how large a certain combustible was that he sold,—his reply was—"about the size of—of—a piece of chalk, sir."

"*Humbuggery*," p. 195.—*Mercy on me.* Don't go into the abstrusities. If you want to publish humbuggerys, just lay your hand lightly on the Alpaca, or "African sheep," so that you may be able to wield the sledge hammer when I name "Mastodon cotton" seed, by R. Abbey. I see a celebrated house in England writes to "we softs," that this cotton would not sell at public or private sale, and here are R. Abbey, of Yazoo city, and your humble servant, trying to sell the seed at $4 per bushel, or as much less as it will sell for. I am in for it, having about half an acre of my poorest land planted with the seed. What my unfortunate friend will do, unless he has acted like myself—not planted this seed—the deponent sayeth not. But this house, Todd, Jackson & Co., have only sent out in 1847, what Mr. Abbey heard from Northern spinners in 1846—that Mastodon could not be used; so I have been told by a respectable gentleman. That "Newfane Yankee" sells something, but *we* Mississippi Yankees, who sell "Mastodon cotton" seed, sell nothing. Which is the best Yankee?

"*Horse Powers*," advertisement, p. 198.—Is it strong enough to run a grist mill that will grind 4 or 5 bushels per hour, or say 40 to 50 bushels per day? We, of this country, want such things, and a very choice and sure-working article had better be presented to as clever a man as the writer of this is, so it should be seen and known, than to be advertised for nothing. I am sure $100 each could be got in Vicksburgh, if its performance was once seen and it was known to wear well. I will erect a house, pay all expenses out, and pay $50 for a power strong enough to grind meal, run a straw cutter, corn and cob mill, &c., &c., and will invite examination. I have gearing ample for my use, but I can use one to a little advantage in being convenient to stables; and to have one where my fellow citizens can see it, I will pay $50. The patentee or owner should risk as much as I do—but I would not have a flimsy rattlestaff of an affair, if it was varnished, and had the "name of the grower marked on it."

We are in need of many of your labor-saving and economizing articles, but are afraid to risk ordering by advertisements. Our powers to gin-stands, cost us about $150, and boarding one to two or three men for one to two or three months. I think a running gear and cotton press cannot cost usually, with iron segments for the gearing, less than $250, at the lowest rate. It seems to me, we ought to get equally good for $150 to $175.
M. W. Phillips.

Edwards, Miss., June 21, 1847.

AGRICULTURAL SCHOOLS.

In view of the approaching session of the Legislature, I ask a small space in your valuable paper, for the consideration of a subject intimately connected with the well being of the farming interest, and one which merits the serious consideration of the legislators and statesmen of the state.

The duty of the state to provide the means of education for *all* those who are to become citizens, will not, I think, be questioned by any reflecting man. If our republican institutions are good, then it should be the desire and the aim of legislation to perpetuate them. If they advance the best good of all the people, then should the statesman's care be continually directed to preserve them—to provide the *means* and multiply the *safeguards* against anarchy and dissolution. This duty cannot be neglected without high criminality, and the legislature which shall fail in this particular, is guilty of treason to the commonwealth, for its peace, prosperity, and very existence is thereby put in peril. It is true that it is negative in its character, but none the less dangerous,—because the omission to o may prove, however, as disastrous as the overt act. With these principles in view, and looking to these ends, education presents itself as a chief means, not, indeed, the education of the few, but the wide and universal spread of knowledge. In republican states, all the people are equal in political privileges, and it is just as important that the poorest be enlightened as the richest, for so far as government is concerned, they are partners, equal in all respects. If the education of the people is then essential to the full development and perpetuation of republican government, it follows, as a matter of course, as the duty of the representative of the people—those upon whom the public good, or the interest of all is thrown—to provide to the fullest extent, the means for the education of the people. "Knowledge is power." In an individual and in a free state, it is more than power; it is the very life blood of the body politic. And what is knowledge in a country of freemen? Not, surely, great acquirements on the part of a few—not a few graduates from three or four colleges—but it means the universal diffusion of intelligence—a general understanding and appreciation of political rights and privileges, on the part of the masses, united with a correct knowledge of the business, and an acquaintance with the best manner of prosecuting the various callings in which the citizen is engaged, in view of the lights of science, and the continual improvements which science and ingenuity is making. It is not needful that all the people should be scholars, but safety demands that all be well informed—free to think and act for themselves.

These general principles, I presume, will not be controverted; but I shall be met here, and told that the duty of the state has been fulfilled—that a general system of education has been provided, and that agricultural schools are not necessary for the dissemination of general intelligence, and that they are not legitimately within the scope of legislative aid. I grant the state has done much; her common school system is worthy of commendation; but even that, good as it is, may be improved. Much may yet be done without overstepping the bounds of propriety, to perfect and render still more useful the system.

The *science* of agriculture has just begun to develop itself in this country, and that most useful of all the sciences, may, I imagine, with the aid of the fostering care of the legislature, be engrafted upon, and be made a permanent part of the common school instruction of the Empire state; and surely, if this be so, no one will turn away from the subject and say it is special, and does not come within the proper action of a legislative body,—the object is designed to benefit one class, and not the whole, and hence it must be denied. If this view of the subject be true, then I say, away with it, for the farmers of this state will never ask any special favors—never ask to be enriched or benefitted at the expense or to the injury of any other class. Although the farming interest has ever been thrown in the background, and even pirated upon to enrich other callings, yet the tiller of the soil will never be guilty of the meanness or injustice of asking any measures which are not just and right. That it is proper for the legislature to aid by the funds of the state in the establishment and maintenance of agricultural schools, is clear, for the following, among other reasons :

1. Agriculture is the *great interest* of the state, and it will be greatly promoted thereby; it is the great and leading interest, because it employs the most capital and labor—yields the most, not only in dollars and cents, but produces the raw material for most other callings, as well as the articles necessary for the subsistence of the whole. Again, it is the leading interest, because every other is more or less dependent upon it, and are only flourishing and prosperous when it is prosperous; and because it embraces within its direct influence the great mass, and in its indirect, nearly the entire of the state. The establishment of agricultural schools then, to aid and promote this great and important interest is but an act for the public good. Either by direct consequence, or through the means of necessary dependence and sympathy.

As a second reason, I remark that agriculture is eminently promotive of virtue, both public and private; that those who live upon the farm and labor in the fields, are, to a great extent, removed from the seductive charms of vice, which present themselves with such fatal fascination in our towns and cities. The state, then, is bound to watch over this interest, to protect, encourage, and improve it, for it forms the great conservative body, upon which, in times of danger and peril, it must rely for support and safety.

As a third reason, I remark that schools are imperatively demanded as an act of self-defence on the part of the state. Our farms must be made more productive, and this can only be done by a better knowledge of the true theory, and more attention to their cultivation. Science, with her mighty power, must be called to our aid. And why? it is asked. I answer, because the great states towards the setting sun, with their boundless acres and their virgin soil, have, and are opening a fearful rivalry with us. They are luring our people to their more prolific bosom, and they are pouring in millions of surplus productions to cheapen our markets; and ere we know it, we shall be shorn of our power, and be forced to yield the proud title of Empire State, unless we bestir ourselves, and study out new means and processes of production, and apply them to our good, but long used and half cultivated soil. I would not snap and snarl like a jealous lover at the prosperity and increase of the rest, but I would say—go on; your glory is our glory, and your prosperity our good; and would then, by noble example and improved cultivation, lead on—keep in advance in the future as in the past, of all our sister states. And in order to do this we want more knowledge, and that we can best attain through the school-house. It is undoubtedly true, that nine-tenths of our farms do not produce one-half of what they are capable of doing, and if we would keep our sons from the cheap and fertile lands of the west, we must learn them how to farm and make money on less quantities of land. And the legislature, looking to the good of the state, is bound to aid by all constitutional means, in so desirable an object.

Again, I remark fourthly, that the aid and support of agricultural schools, is but the promotion of the general system of education, for it is not needful nor necessary to separate agriculture from our schools as they now exist, and establish separate and entirely independent establishments; but, on the contrary, the very object of aid from the state, is to engraft agriculture permanently into, and make it a part and parcel of the great system of instruction now so bountifully supplied by the state. The great point is to get started—to prepare competent teachers, and provide proper books, and to demonstrate by experiment the practicability of the thing. And then our glorious common school system will answer to carry it on and perfect it, without increase of taxation. But I am making this paper too long. In another number, I will speak more definitely of the feasibility of the plan of agricultural schools, and of their great importance to the body of the people of the state; and in the meantime I ask the members of the legislature to look at the subject, examine it carefully, and then act as their better judgment and sense of duty shall determine.

D. A. OGDEN.

Penn Yan, *August* 6, 1847.

THE TOMATO.—The use of this fruit as food, is said to have been derived by us from the Spaniards. It has been long used also by the French and Italians. The date of its introduction to this country is unknown, though it is only within a recent period that it has been adopted as a culinary article. Thirty years ago the writer cultivated it under the name of *love-apple*, but had then no idea that it was of any value except as an ornament to the flower garden.

HON. E. WHITTLESEY, in a letter to Dr. KIRTLAND, (published in the *Western Reserve Magazine of Horticulture*,) states that the tomato has been used as food in Ohio, more than half a century. He says—" Col. Vigo, an Italian gentleman, lived at Vincennes, and prepared the juice of the tomato to mix in beef gravy, and for making catchup, more than fifty-two years ago. Colonel Hamtramck raised the tomato at Detroit and Fort Wayne before 1803. Judge Thomas furnished his table with the raw tomato at Lawrenceburg, Indiana, in 1807. The French stewed it at Kaskaskia, in 1807 and '8."

BREEDING HORSES—No. V

In selecting a stallion or mare for breeding, the first object should be to see that they possess the requisites, individually, which are desired in the stock to be bred; next, to obtain a knowledge of their progenitors; because, on the principle that "like begets like," defects as well as excellencies are transmitted by parents to their offspring. Hereditary defects are not always apparent—that is, they sometimes lie dormant for one generation or more, and then break out. Before animals have produced progeny, the best evidence of what their progeny will be, is what their ancestors have been, because there is a tendency to "breed back." Animals of the same blood, however, are not equally valuable as breeders; hence, the surest evidence of the value of a breeding animal, is the character of the stock it produces. Thus the value of pedigree consists in affording, in advance, an *indication* of the value of an animal as a breeder, but the chararter of the offspring and descendants, may be regarded as exhibiting the *degree* of value it possesses—the one may be regarded as *prima-facia* evidence, the other as demonstrative.

The mare should possess, as the first and most important requisite, a good constitution and healthy habit. She should be free from diseases, both of a hereditary and incidental nature. Her form should be that which denotes strength, energy, and endurance. She should possess an intelligent and tractable disposition,—qualities which add value in many respects. They render animals more safe and trust-worthy in all situations, enable them to perform their work in a manner more easy to themselves, and more agreeable to their drivers. In fact, such a disposition amounts to an actual saving in the wear of the animal machine, and insures its longer duration.

The stallion should possess the form and requisites necessary in the breed or variety to which he belongs, in the greatest practicable degree. In regard to form, Mr. YOUATT has well described what is deemed the most important point. "If there be," says he, "one point which we should say is absolutely essential, it is *compactness*—as much goodness and strength as possible condensed in a little space."

A capacious chest—not too wide—in a roadster or carriage horse, but deep and rounding—is an essential point, both in the stallion and mare. A large chest gives room for large lungs, which are absolutely necessary to give *wind* to the horse. The blood must flow through the lungs, and there part with a portion of its carbon, and receive in its place a due quantity of oxygen. This is essential to life. In rapid exercise, respiration is quickened, a greater quantity of blood is sent to the lungs in the same time, than when the animal was at rest. Unless there is room for this, and for the free action of the lungs under this pressure of blood, the process of oxydation will not be properly performed, the circulation of the blood will be checked, respiration will be impeded, and the animal may die of suffocation. A horse with small lungs cannot long bear violent exertion; hence, as Mr. YOUATT observes, when speaking of the hunter—"the majority of horses that perish in the field, are narrow chested."

The head should be rather small, neatly turned, and broad across the forehead; the face straight, and lean from the eyes downward; the nostrils large and expansive; the jaws well rounded with full, strong muscles. This latter point indicates that the animal has a firm, muscular system, and horses which have it, grind th
food more thoroughly when they become old, and
not show old age so soon as those whose jaws are l
and thin. The eye should be full and bright, the e
thin and upright.

The shoulders should be oblique, and well laid in
the top. It may be safely asserted that no good roa
ster was ever known with upright shoulders. The
below the knee and hock should be clean, the bone fla
the sinews large and prominent, making the sh
wide. The knee and hock should be low, or we
"let down;" the fore-arm and thigh large and musc
lar; the hock wide, free from lumps or kernels, a
the cord above should run a good distance from th
tibia or lower bone of the thigh.

Did time and spase permit, the advantages of a
these points might be shown on mechanical prin
ples. There are many other points which should
regarded in selecting horses for breeding, but th
above may be considered the most important, and th
present is not the proper occasion for going more in
detail. As before remarked, it should be the aim
procure animals which are as perfect as possible
their outward form and internal structure, because o
this obviously depends their ability to perform wha
we require; but with all our attention in this respect
disappointment may sometimes arise. Some animal
may, as regards mechanical conformation, be fre
from defect, and yet be greatly lacking in the pow
of locomotion. The tangible parts of the machin
may be right, and their combination apparently per
fect, but the *nervous energy*—that invisible, imponde
rable fluid, necessary to its proper movements, may b
wanting. This vital or nervous energy, is, perhaps
better indicated by the animal's eye than by any othe
organ. Indeed, the eye may be regarded as the inde
to the general character in all cases. If this is ful
and bright, giving to the animal a spirited and live
air, with an expression of intelligence, he will not ofte
be deficient in nervous energy. But the safest te
will be an actual trial under the saddle or in harness.

It has been remarked that it may be necessary
breed a stock or family of horses considerably with
itself, in order to establish uniformity of characteri
tics. Some may object that this would be breedi
from too close affinities. A dissertation on *in-an*
breeding will not here be attempted; whatever may
the advantages or disadvantages of that system.
course advised has no special connection with it.
this country, it is seldom or never the case that ma
horses can be found of precisely the same blood.
single stallion often begets, with the common ma
of the country, a numerous progeny. Having had
common sire, *one-half* of the blood of this stock w
of course be the same; but as the blood of no two
the dams, perhaps, was alike, there will necess
be in the offspring an indefinite variation. The bre
ing of such a stock together could not be called in-a
in. Those individuals should be chosen as breed
which in points and qualities approach nearest to t
standard that has been adopted. So long as this r
is strictly followed, and none but animals of st
constitution are allowed to propagate, no danger n
be apprehended from such an affinity of blood as
been spoken of.

It is not, however, in all cases expedient to co
fine the selection of breeders to one family. On t

ntrary, a change is advisable whenever an animal ually as well bred and of superior points can bo ob-ined; but the selection should always be made from stock which in its general characteristics closely re-mbles the one which has before been bred from, herwise the change may defeat the object desired, breaking up the tendency of the stock to assimi-te to a common standard. With breeds that are lready established, the course advised by Mr. Youatt, undoubtedly the true one, viz:—that "the most per-ect of the *same breed* should be selected, but varied y being frequently taken from different stocks."

The mare is capable of breeding at two years old, nd will generally continue to breed till she is twenty. ome individuals of remarkably strong constitutions ave been known to rear foals at the age of thirty. ut the best period for breeding may be said to be rom the fifth to the fifteenth year. In proportion to he strength and vigor of the mare, will generally be he value of the foal. She should be supplied with bundance of wholesome food during pregnancy and while she is suckling. She should not be over-worked t any time, but with proper care may perform light abor about the farm up to the time of foaling.

Breeding mares may be kept during winter at little xpense, provided they are sheltered and fed with are. If they are exercised by work every day, they will only need a good stall, well littered at night. If ot worked, they should have a yard attached to their table, or to which they may be taken, where they can have air and exercise. They should not run in yards with horned cattle, because the cattle are liable to gore them. Their food may be hay, or hay and straw cut and mixed together with some shorts, or two or three quarts of corn and cob meal daily. While they are in the yards, they may pick over corn-fodder and coarse hay or straw. Potatoes or carrots at the rate of a peck per day, will keep the bowels in good order, and improve their general health and appearance. If the vegetables are given, the shorts and meal may be omitted, though the latter will be preferable if the mare is worked much.

It is better that the mares should not foal till they go to pasture. They are less liable to accidents when running at large, and the grass will generaly give a better flow of milk than the food they will receive in the stable. A shelter from rain should be provided till the weather has become warm. Until the foal is three or four weeks old, it is advisable that the mare should be used but very little. After that she will bear to be put to light and slow draught; but the blood should not be heated, as this would affect the quality of the milk, and might occasion the foal great injury.

At the age of four or five months, the foal should be taken from the mare and weaned. It will be best to put it in some yard or shed where it can neither see the dam nor annoy her by its noise. It should be fed with sweet grass, or bright clover hay, or rowen, with a few oats and potatoes or carrots. This kind of food should be continued through the first winter, and till the animal can be turned to grass the next season. Nothing is more essential to the proper development of the natural characteristics, than liberal feeding, (not *pampering*,) and good care for the first year. It is not recommended to give them a large quantity of grain—that may be too stimulating—but a pint to a quart of oats per day, with from half a peck to a peck of carrots or potatoes, and as much good hay as they will eat during the time they are kept up, will be amply paid for in the growth and condition of the animal. During summer they will require nothing but grass.

After the first winter they will bear rougher usage and coarser fare. An open shed, facing to the sun, will answer for shelter. They can eat some straw, corn-fodder, and inferior hay, while the weather is cold and their appetites are sharp; but a daily allowance of vegetables will serve to keep up their growth, and may be given to advantage.

They should be early accustomed to the halter and bridle. During the first winter they should be frequently led out, and be taught to go forward and stop at the proper word. They should be used with constant kindness—gently patted with the hand about the head and neck—their legs handled and their feet lifted. Treatment of this sort, commenced when the animal is young, will almost insure a docile and tractable horse; and where proper attention is paid to his education and training, his attachment to man is scarcely less than that of the dog.

The horse may be put to moderate work at four years old; but as his frame does not become fully matured and settled together till he is seven, he should not be subjected to constant and hard labor, till he has passed that age. It has been repeatedly observed that our best and most durable horses have been very carefully used while they were young; and our fast trotters have generally made their best time after they were ten years old. A good horse will work till he is twenty, provided the driver is at all times duly impressed with the important truth contained in the proverb—"A merciful man is merciful to his beast."

The horse is somewhat more subject to diseases than most of our domestic animals, though it may be safely asserted that a large proportion of them arise from ill usage. It is not my present purpose, however, to speak particularly in regard to this subject, but would recommend Mr. Youatt's excellent work entitled "The Horse," as containing the fullest, plainest, and best directions for the treatment of this animal under all circumstances.

In concluding these articles, the writer would with great earnestness enjoin upon the breeders of horses, the importance of producing *the best*. The cost of rearing horses, which at four years old will bring on the average from $100 to $150, is no greater than that of rearing those which will only bring half of those sums; and in some instances it would not be as much, for it is a fact that the best stocks are the least liable to disease and accidents. Breeding poor horses—such as have neither strength nor stamina to fit them for any *useful* business, always has been and will be attended with loss; while those *really* valuable will afford a remunerating profit. EQUUS.

The English Hunter.—At the late meeting of the Royal Agricultural Society, Sir Henry Smith, after having spoken of the improvements which have been made in various descriptions of stock, said—"But let me call your attention to one branch of produce for which this county of England [Northampton,] was formerly so famed—I mean the English hunter—that class of horse for which England was formerly so famed, and which, while it carried the fox hunter, was also, when exported to a foreign country in time of war, well calculated to teach our enemies that a soldier, mounted on a hunter, was an enemy not to be resisted. Let me, therefore impress upon you, and upon the members of this institution, that you ought not to lose sight of this valuable class of horses in England. I cannot too much, in a military point of view, impress upon the members of this society the importance of preserving this breed of horses, which are at present degenerating in their native land."

Trotting Horses for Hunting.—His Majesty George Third was much devoted to the sports of the chase. It is said that he generally preferred fast trotting horses, when hunting the stag, or on the road, and he mostly left all his courtiers and attendants behind.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

LETTERS FROM PROF. NORTON.

NO. VIII.

Steamer Washington, July 22d, 1847.

Messrs. Editors—I take the opportunity of a eisure hour on my homeward voyage, to continue my notice of Dutch Polders, &c., began in your last number.

I had just finished my description of the drawing and laying out of Polders. These tracts of reclaimed land are not usually plowed, being principally devoted to grazing—for this reason North Holland, being chiefly composed of Polders, is one of the richest dairy districts in the world. The cows are generally in fine condition, and the pastures kept in good order, although in some places the butter cups were rather too abundant. Great pains is taken to preserve the manure in handsome heaps; but, by a strange inconsistency, these are almost always on the banks of some canal or ditch into which they drain, and color the water deeply with valuable enriching materials. Large flocks of ducks and geese are kept in the ditches of these polders, and straw pots are placed in situations convenient for their nests. Swans are also quite frequent.

The Wurmer polder is, I should think, three miles in length, and at one of its angles we found the town of Purmerende. This town is situated in the midst of three large polders—the Purmer, the Wurmer and the Beemster. Its location renders it a great centre for the cheese trade. There is a fair once a week, and we happened to visit the place on that day. The whole space allotted to the market was filled with piles of cheeses, all of them round, and from six to eight inches in diameter. No flat cheeses are made in this section. The sale seemed to be going on briskly. Each lot bought was immediately transferred to the town scales and weighed. Beside the cheese fair, was one for cattle and pigs, in another part of the town. The number of cows for sale was very great, consisting almost without exception of the usual large Dutch black and white breed. The pigs were all enclosed in wicker baskets, something in the same manner that fowls are brought to the New-York markets.

I found that the Purmer polder was richer and more prosperous than the Wurmer, and the Beemster is said to surpass almost any other in Holland.

We obtained admission to one dairy farm, and got as much information as we could upon the actual statistics of their business. The farm was one of about eighty acres. Thirty-two cows were kept upon it, beside a small flock of sheep. At the time of our visit, they were making one hundred and twenty cheeses a week, weighing about five pounds English, each; beside this they made from 20 to 25 pounds of butter.

The dairy itself was very neat, indeed scrupulously so. In the first room, a very long one, stood the vessels with milk, the churns, &c., while on shelves above were placed cheeses to dry. There were numerous little places like stalls, along the sides of the room, and the floors of these were strewed with shells, while around the sides were shelves covered with china. These places were entirely for ornament, the china only being taken down occasionally to be cleaned. The salting is performed in a separate room. There were two vats of pickle—one very strong, and the other a little weaker; in this latter they are first placed. Each cheese is fitted into a little round tub of just the roper size to receive it. These tubs allow the upper rt of the cheese to appear above the surface of the pickle. Each cheese is turned over several times during the day, and a little salt always placed upon the exposed part immediately after turning.

The churn was of the common barrel form, worked by means of a wheel, and the cheese press of a rude construction, being a large stone at the end of a lever. This dairy was in the lower part of the house, and here appeared to be the dwelling place of the whole family. The sleeping rooms were on the uppermost floor of all, and must have been very dark and unpleasant. After seeing the dairy, the damsel who was our conductress, informed us that the best rooms were yet to be seen by going up a ladder of four or five steps from the dairy. Before ascending this, she took off her shoes, and presented a mat for us to wipe ours. The rooms that we now entered were very handsomely furnished—the chests, drawers, the bureaus, &c., being of mahogany, and the shelves loaded as usual with useless china. Every portion of the floor that was visible, was polished with frequent scrubbing. Unless on occasion of a death or marriage, or some very unusual festivity, this part of the house was never open. The family lived in dark, unpleasant rooms, and only entered there once a week for the purpose of a thorough cleaning. The same system prevails in a great majority of Dutch farm-houses, and to a great extent even in the cities.

Some of the dairies of North Holland do not make cheese, but send their milk to Amsterdam on the canals—a boat calls for the full vessels in the morning, and leaves them empty on its return. It is carried about the streets by women, ordinarily in pails.

I must now, for the second time, close a series of letters from abroad, and do so with the hope that I may, at some future time, be able to send you similar series and contributions, referring to the agricultural peculiarities and improvements in different sections of our own country. I am, gentlemen, yours truly,

John P. Norton.

RURAL NOTICES ABROAD.—By Ik. Marvel.

NO. VIII.

A French Village.—There are no white wood houses, with green blinds, and cherry trees in front, and capacious wood sheds behind, belonging to a French village. It is indeed as unlike as possible to an American's idea of a village.

You have been riding, perhaps, or walking along a straight, Macadamized thoroughfare, very broad, and very hard, and in summer very dusty, and you have noticed with your American eye, at first that there are no fences between you and the waving fields of grain, or the fluttering leaved vineyards. Again, you have noticed that there was no apparent division in the property, and that the laborers, men and women, were working quietly—save an occasional laugh or song—one party among the grain, and another among the vines. Further, you have noticed occasional rows of trees planted beside the route, and sometimes, though rarely, a thicket of tall thickly growing wood; then you see what seems the strangely fashioned tower of a church, appearing in advance among the trees upon the right, or the left, and, as at home, you count it as a sign of an approaching village.

Presently, you reach a little white, low cottage, standing a dozen feet back from the road, with a slatternly kept yard before it, in which, perhaps, are two or three plum trees, or possibly a pear. In the garden at the side are two or three more. The house is of rough stone covered with mortar, and the floor is covered with baked tiles, glossed over with grease, and wax, and filth. A rough made spade or plow, will perhaps be lying at the door—a child or two will look over the fence at you, and a short woman, with very thick, stout sabots,[*] will clump to the door, (which she nearly fills up,) and look curiously after you, shading her eyes with her hand. The garden is carelessly cultivated, and filled only with the more necessary vegetables. It is separated by a rude paling from the vineyard or grass-land behind.

The road now becomes paved, perhaps with round stones, and a paling or hedge of singular growth skirts the way until you come to other cottages, similar in general construction to the first. Some more pretending one will have a dried bough hanging over the door, which means that you can there get wine and lodging, and possibly, if not fastidious, a bed. If the village and inn be quite small, you will be received in the kitchen, which is the most pretending room in the house, furnished with a large fire-place, with its adjuncts of kettles and fry-pans, and a very large oak table with oaken benches. The village innkeeper or *aubergiste*, has not unfrequently a considerable patch of land to cultivate, and his garden-spot will be of larger size than that of the other villagers; but I never could see that his profession as *aubergiste* helped his profession as farmer or gardener. If they have better wine, they do not make it, and if they have better cheese, it is the cheese of Gruyere.

If the village be large, the inn will have a huge white stable, with an announcement over its door, in staring capitals, of the number of horses that can be kept. Great piles of manure will be smoking about its door in the sun, and none of those economic arrangements for saving and securing fertilizing material can be observed, which prevail throughout Belgium and Holland.

The inn, as well as all the houses around it, which make up the central part of the village, will be immediately upon the street. The little shops of such clumsy working artisans as belong to the village, will be a part of, or united to their houses; and their handicraft will make so lazy and lifeless a show, that it will add little to the bustle of the place. Perhaps twenty little cottages, such as I have first described, with the *auberge* and the church, group together to form the village; then comes a straggling house or two—possibly of somewhat better appearance, as belonging to the priest or village grocer, then will recur again the unfenced vineyards and grain fields.

The cows, which supply the villagers with their milk and butter, which last is, in many of the interior districts, villainously poor, are fed beside the way, watched by knitting girls, or bare-legged boys, and at the milking are possibly treated with a cabbage leaf or two from the little garden, and housed under a rough shed attached to the cottage.

These villagers have all their steady and unvarying employments. Perhaps one is a *roulage*[†] man, making his monthly trips through the village, from Paris, on to the borders of Switzerland, and supplying his family with such proportion of his small profits as is not needed to supply his evening's pipe, and his daily bottle of wine.

Another, perhaps occupying the very humblest of the cottages, is a stone-breaker upon the highway, and spends year upon year, on his little cross-legged stool, beating pebbles for the Mc-Adamized road, and chatting with such foot-goers as pass by his way. Another is a soldier, enrolled in *la grande armée*, and living now at Paris, and the next year at Strasburg, and the next, fighting the Algerines.

There are the day-laborers, going miles to their harvesting, or their work in the vineyards, and carrying with them their coarse wheaten loaf, a bit of cheese, and canteen of wine, to make gay their hour's nooning under the poplars. In the grape-time, of course there will be added the richest fruit at will, which is eaten without stint, and, so far as I could observe (and my own experience confirms the observation,) with entire harmlessness. The country shop, if any exist in the village, will be of that unpretending and mixed sort which may be found in the smaller towns of New England—with this marked exception, however, that since the French peasantry have the good sense to dress in a way becoming their labor and style, you will see in the shops none of the second-rate, flimsy finery of cities; their *fête* day dresses are of clean homespun, and they make show of their success in labor or in life, not by wearing gaudy ribbons, and assuming ill-fitting fashions—but by uniform cheerfulness and urbanity.

The young men of the village have no *El Dorado* of 'the West' to lure them away; they are stimulated by no freely circulating, every day newspapers; an improvement in agriculture or in trade is slow to reach them. Half, perhaps, are taken away into the army; the ambitious ones of the residue, burn for some ignoble employment at the great capital; or succeed a father to the conduct of a *roulage* convoy; or push their influence to secure a place as postillion in a neighboring town; or as driver to a diligence team—hoping that some day, and it is the height of their ambition, they may arrive at the dignity of conductor, and wear their braided jackets and tasselled caps—in which event their occasional visits to their native village is an important event, and they will carry away the hearts of all the pretty maidens of the country.

Thus the French village, without any elements of progress, passes a stationary and sleepy existence. It is the same this year that it was thirty years ago—the same church, the same rude image of the virgin—the same auberge—changed only in having a new bough shaking at the door, and perhaps a new crane to fry its omelettes, and to boil the pot. The same notions prevail of sowing and of harvest—and the same ignorant carelessness, and the same innocent gaieties.

Though this little picture of a country village in other lands, is not strictly agricultural, I have thought American village-livers would be glad to see and enjoy the fortunate contrast which their position will enable them to make, and so, take new courage for exertion, and wear new modesty in their successes.

A SOLDIER'S OPINION OF WAR.—SIR HENRY SMITH, "the hero of Aliwal," in a speech at the late meeting of the Royal Agricultural Society, in comparing the pursuit of agriculture with the business of war, said: "Let me impress upon you that, though my profession be one of arms, yet it is an accursed profession, and is of utility alone when it is used to promote the legitimate object of war—a lasting peace." He also assured the audience that if they had viewed "the accursed horrors of war," as he had done, they would have more occasion to be contented with their vocation.

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[*] A heavy wooden shoe, cut out of beech or linden wood, pointed at the toe, and with high, small heels, worn almost universally by the peasantry of France. They of course make a prodigious clattering, and you frequently, on the pavement of a town, turn about, thinking a horse is at your heels, at the sound only of some active country beauty.

[†] The roulage is a cart with two wheels, drawn by from two to eight horses, which transports heavy frieght from town to town, and even from country to country, doing the same duty which, before the days of railroads, used to be performed by our heavy Pennsylvania wagons.

THE FARMER'S NOTE BOOK.

Experiments in Farming.—I have been engaged eight years farming on the farm[*] I now occupy, and in consequence of the feeble state of my wife's health am compelled to abandon the business. I thought a few brief remarks upon my experience would perhaps be acceptable to you and the readers of the Cultivator. I have been an attentive reader of its columns for the last ten years, and a close observer of such things as would profit me in my business. I can assure any person who wishes to make farming profitable, that he will find the Cultivator to be a publication that he should by all means have as a book of reference. He can have it bound, or if he pleases stitch it in pasteboard, as I have done, and he will not only find it pleasant but profitable to read the different opinions upon any one point, and then apply common sense, and he will most invariably come to the right conclusion. I have a farm so situated in point of location, convenience and soil, as to make it just the desideratum for what is termed mixed husbandry, and this I find the most profitable way of farming.

I believe the way to use manure the most profitably is to spread it broadcast from the cart in a rotten state, and harrow it in, in the fall of the year. Sow timothy seed after the last harrowing, and clover seed on the same ground about the first of March following. The manure, if it is but lightly dressed, insures not only the grain but also the grass seed, and by well covering the ground, gives noxious weeds no chance to spring up. As my barnyard is near a tannery, where I can have any quantity of spent bark for the drawing, (and three men will draw fifty loads a day,) I have for the last three years drawn from fifty to eighty loads, and bedded my yards from four to eight inches thick, directly after drawing out the manure in the fall. I am then sure to have some straw to throw over ; on this I yard my cows and winter my stock. The surface of the yard descends to one corner, where I have a concave that will hold a number of hogsheads, and here I put the bark the thickest ; here also stands my hog-pen, the manure of which is shoved into the concave. After I pen my hogs to fatten in the fall, I wheel about a barrow load of spent bark to each hog every week, as dry as I can get it from the heap that I have laying near by, and throw it in the pen. The hogs work this out nearly sufficient, and at the same time mix it with the manure. The tan bark in both cases acts as an absorbent, and the liquids destroy or neutralize the acid that make the bark deleterious to vegetation. I draw it out only in the fall upon the ground I intend for winter grain, and put it in heaps of six or seven to the load. It then smells and looks much as it did when it was first drawn ; but after laying a few days exposed to the atmosphere, it turns black and smells like stable manure, and is equal to it in value. This experience has proved to a demonstration.

I have about two acres of extra quality of muck—from this I drew a quantity on a heap about two years ago. About the 15th of last May I dropped my corn, and with a cart and oxen drew fifty loads from this heap, covering each hill with a middle-sized shovel full of muck—three men taking ten rows at a time. I left two rows in the middle of the field without muck, the soil being the same. The ground was quite dry, and in want of rain at the time, and in thirty-six hours after it was planted the chit began to appear, and the difference in the corn throughout the season was so perceptible, that any stranger could pick out the rows by walking over the field. This last experiment was suggested by another person ; but the former, if I am not the first person that has proved its value, I have at least done so without any knowledge of the fact.

I find that keeping cows for the purpose of making butter (especially on a farm so well calculated as mine to afford pasture, and where churning is done by water power) is of the most profitable, and at the same time it enables me to feed up all the coarse fodder that would have been of little value to me otherwise, and to make manure. I was able every year by keeping three sows and one boar over winter, to sell from $110 to $120 worth of pork, or pigs, which were weaned when six weeks old, and the sows had another litter by the last week in August, which were weaned as before ; and by good management I could fatten the sows before winter. Without milk this could not be done, and with the addition of boiled apples and some pumpkins or potatoes, it can be done without feeding much grain. In fact, I am fully persuaded that apples are of more value to make pork of than they are to make cider, as far as dollars are concerned ; and when we take into consideration the infinite mischief that is produced by cider drinking, the difference is enormous.

The average produce of my cows has been about $30 each per annum, for eight years past. Up to this time this year, I have sold $110 worth of butter from eight cows and two yearling heifers, besides the amount consumed in my family of seven persons.

Having the whole charge of my dairy in the month of June last, (my wife was confined to her bed,) I kept the milk of six cows and the two heifers separate for two milkings, and churned the whole of the milk of each one separate, and the following was the result :—

Cows.	Weight of milk.		Pounds of butter.
No. 1	41 5 oz.	gave	1 6 oz.
" 2	43 8 "	"	1 8 "
" 3	35 6 "	"	1 6 "
" 4	35 8 "	"	1 6 "
" 5	33 14 "	"	1 5 "
" 6	34 2 "	"	1 4 "
Heifer 1	27 6 "	"	0 15 "
" 2	19 7 "	"	0 14 "

It has shown quite a difference in the quality of the milk, and it further shows that it is not in the size or beauty of the cow as to the quantity or quality. No 1 is the poorest and most ill-looking cow I own. She was an ill-looking calf, and she always remained so as she grew up, and after I commenced milking her, I supposed her to be the best cow I had, which this experiment has proved to be a fact ;[*] although she gave a little less milk and butter than number 2, I have every reason to believe that the accident that happened to her a few weeks previous, (having badly sprained her knee joint,) which compelled me to keep her up, has caused all that or more difference, for she was very discontented in her confinement. As to her continuing in milk when other cows shrink, she is before every cow I ever owned. She always has been thin in flesh, and is so now. No. 2 is a little brindle cow—the smallest cow of the lot; and No. 2, heifer, from which was churned fourteen ounces of butter from nineteen pounds seven ounces of milk, was not two years old (and is very small) when she came in, and her calf was so large that I lost it, and came near losing her; but the experiment has proved that she gives the richest milk of all the cows.

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[*] This farm is for sale—see advertisement in Cultivator for last month, page 294.

[* It should not be supposed from this, that *ill looks* in a cow are indicative of good dairy qualities. It is not denied that a cow remarkable for her ugliness *may* be a good milker, but this is rather an exception than the rule. Most persons who have had experience with cows, will admit that their value is generally denoted by certain points, and these are the points, or "lines of beauty," for a milch cow. Those of our readers who are desirous of knowing what we consider these points, are referred to the Cultivator for 1846, pages 9 and 10.—Eds.]

It has not been as much trouble as I anticipated to try this last experiment, and no person that intends to make butter making the most profitable to him, should neglect to try it once a year. It would show him the exact value of each cow, and the satisfaction will well repay the trouble. Eli Westfall. *Rhinebeck, Dutchess county. Sept.*, 1847.

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Foot Paths alongside of Highways.—Public roads are for the use and accommodation of all the people, and there is no reason why they ought not to be improved for the benefit of those who go on foot, as well as those who ride in carriages.

I have long thought of this improvement, and a late notice in the Cultivator, that foot-paths along highways are common in England, induces this notice.

With a neighbor, who had an interest in making a good path to the village, in common with myself, we made a foot path of about half a mile, at so little expense and to such manifest advantage, that I am induced to give an account of it for the benefit of all whom it may concern.

A space about five or six feet wide, on the side of the road, is made the foundation. A few furrows are plowed alongside, of perhaps an equal width. The earth from these furrows is thrown by a shovel upon the paths, equallizing the surface as near as may be, and the edge protected by sodding, thus forming a raised path for foot passengers.

Where no extraordinary difficulties exist, such as filling up low ground, or removing stones, this kind of path can be made for less than one cent a foot in length, (I have had 400 feet graded for $3,) and occasional gravelling when necessary, can be done at leisure times when it may be said to cost nothing. The advantages are hardly to be estimated, especially at night, and as the cost is but about $50 per mile, a neighborhood can readily do all that is wanted, each working on his own part. Walking is the natural and best exercise of the body, and everything ought to be done to promote it. P.

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Improved Cultivator.—In looking over the August number of your paper, in an article on the implement called the Cultivator, I notice the following remark: "We have rarely seen an implement of this kind constructed exactly to our liking." A similar remark is frequently made by others. Besides the objections which you have named, I have noticed one serious one in the circumstance of their leaving an open track or furrow next to the row of corn, which, on hillsides, in case of heavy rains, conducts the water, and causes it to gully near, and sometimes directly under the hills. To obviate the above-named objection, there has been a cultivator constructed in these parts, the present season, on a plan entirely the reverse of the ordinary form, being widest in front, and terminating in a single tooth behind, so that the last track or furrow, which is the one left open, is at or near the centre, between the rows. It consists of a gang of shovel-plows, some 4½ inches wide and nine inches long, attached to posts or standards of wood by screw-bolts. The first and second pairs of teeth are attached to cross-bars passing through a beam like a plow-beam, the front one (say) two feet long, the next one foot, and the last tooth is attached to the hind end of the beam. The teeth or shoes are pointed at both ends, so that when one point is worn out it can be easily turned and will then wear as much longer. The implement is light, (weighing less than fifty pounds,) is of easy draught, and at the same time appears to be of sufficient strength, and performs the work far superior to anything else of the kind that has ever come under my observation. It can be made to run shallow, just skimming the surface near the rows, and at the same time stirring the soil in the centre as deep as if it were plowed; or it will work equally deep next to the rows, if necessary. It is certain death on sorrel and all kinds of summer grass and weeds, and pulverizes the soil to perfection. A further description can not well be given without a drawing. I forgot to mention that this implement never clogs or chokes with weeds or coarse manure so much but that a small effort will clean it. Wardwell. *Elba, Mich., Aug.* 27, 1847.

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"Break the Crust."—Reading in the June number of the Cultivator an article with this title, brought to my recollection a circumstance that I was partially acquainted with. Many years ago, when I lived in Connecticut, a man from among my acquaintance removed from that state into Vermont. He was a farmer that understood his business and attended to it. Some years after, I made a tour into Vermont, and the first call that I made after crossing the river out of New Hampshire, was at his house. He had got a fine farm, a good proportion of which was intervale on the Connecticut. There was a field of three acres, on the intervale before the door, which, he said, when he came to make his purchase, had on it a very stunted growth of corn. To use his own words, "It was but little bigger than pennyroyal. He asked the owner the reason of the corn making such a miserable appearance. He said he did not know. But, said my friend, "I knew." He finally bought the farm, and the next season undertook to renovate that field solely by plowing. He plowed every opportunity through the season, taking care to plow only when the dew was on, or immediately after a rain. He went over it a number of times in the season, and sowed it with wheat in the fall; and when he came to harvest and thresh it, he had 154½ bushels, averaging 51½ to the acre. J. W. *Tunbridge, Vt.*, 1847.

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Good Yield of Potatoes.—Mr. Henry Hall, an Englishman, rented last year one acre and one rood of ground, one and a half miles from Zanesville, Ohio, on one acre of which he raised more than 400 bushels of superior Pink-eye and Mercer potatoes,—the result, not of high manuring, but of systematic and thorough cultivation. The spade was the only implement used in preparing the ground. The tubers were planted early, in drills, and very close, and the ground kept perfectly clean. J. Townsend.

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Bearing of Trees in Even and Odd Years.—The editor of the *Boston Cultivator* believes that fruit trees bear most in "even" years. He has lately made a journey to the western part of Maine, and he states that the crop of apples in that section is very light and of poor quality. He adds—"In the same region we saw good crops last year—confirming our views as to having good crops of apples in even years if the season be favorable, and light crops in odd years, even in good seasons." We suppose 1847 is as "odd" a year in the vicinity of Albany as in the western part of Maine, yet the crop of apples here is greater this season than for many years—almost every tree being loaded to the utmost.

THE ORCHARD AND THE GARDEN

RIPENING WINTER PEARS.

More difficulty has been found in preserving winter pears, and bringing them to a fine eating condition, than some other winter fruit. Some good cultivators have been so unsuccessful, as to question the propriety of attempting to raise winter pears at all. Others, again, have succeeded finely. This difficulty has resulted from the rapidity with which winter pears become *dry*, or evaporate through the skin, a difficulty which scarcely exists in the apple. Hence, if the room in which they are kept, is too dry, they soon wither; if too moist, they decay. The latter more frequently proves the ruin of winter pears. Hence, it usually happens, that success does not depend on skill in raising, but on the accident of possessing a cellar or store-room, of just such a degree of humidity as to avoid these two extremes. And, hence, the attention should be directed to remedy this difficulty, by removing the causes of too much moisture in one case, and dryness in the other.

This can only be done by direct experiment, using the specimens as hygrometers, and lessening or increasing the moisture of the room, as may be needed.

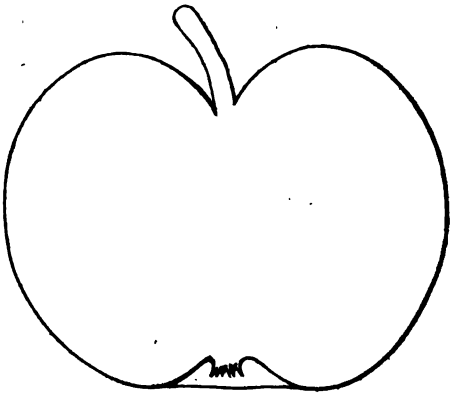
No person has perhaps given more attention to the ripening of winter pears than Saml. Walker, of Roxbury, Mass., and at different times he has given the results of his experience to the public. In an article from his pen published some months ago in the Horticulturist, he recommends two apartments—one a *keeping*, and the other a *ripening* room to be fitted up for the purpose. "The floor of the keeping room should be of brick or stone; the ripening room floor to be of wood, if you please, covered with a carpet, and to render it comfortable and suitable for the purpose, a fire-place to heat the apartment, when necessary." The cultivator of limited means, will make a portion or apartment of his cellar answer for the former, and a cupboard or set of shelves in, or adjoining the common living room, the latter.

It is well known, that not only the quality, but the period of maturity, in late autumn and winter pears, depends greatly on the treatment they receive. The Doyenne, for instance, which so far north as Albany and Rochester, assumes, in ordinary seasons, the character of an early winter fruit, may be ripened late in autumn in a warm room, or kept till mid-winter in one at a temperature a little above freezing. Success in ripening pears depends, in most cases, on keeping the fruit at a low temperature till near the usual time of maturity, when a few days in a moderately warm room will perfect the process. In the article of S. Walker, already alluded to, are the following excellent practical remarks, which cannot fail to be valueble to most pear raisers:

"All pears which come to maturity in the autumn and winter, should not be gathered till the fruit has attained its full growth, (about the middle of October at Boston.) This should be done by hand, some fine day when the fruit is perfectly dry, keeping each kind separate, and labeling the same with its name, the day it was gathered, and the season of its ripening. [Barrels, boxes, baskets, or bins, are recommended, as the quantity of each kind may require.] The fruit being thus placed in the keeping room, care should be taken to keep the room cool, dark and dry; shutters and curtains should be provided for the windows, to close them up during the day, if the weather is bright, dry, and hot; at night, when the weather will permit, the thermometer not ranging below 30 degrees, the windows may be all, or in part, left open for fresh air. They should be closed early in the morning to keep in the cool night air. If mould or mildew should be seen upon the fruit, it should be removed with a dry cloth or silk handkerchief; if about the floor or other part of the building, strew a small quantity of air-slacked lime about the room.

"As the period of ripening approaches, all the varieties should be examined; the fruit that shows signs of its soon coming to maturity, should be carefully packed up with layers of cotton batting, in tight boxes, and in no case should the box be opened, or the fruit unnecessarily exposed to the air. From the time fruit is gaththered, until it is *fully* ripe, it, should, in my opinion, be kept in close, dry vessels. The pears thus boxed up should be placed in the ripening room, keeping the room at a temperature of from 55 to 75 degrees of heat."

The same article, in speaking of the different treatment which different varieties of the pear require, states that the *Chaumontel* will ripen when exposed to great changes of temperature; even if left upon the ground, covered with snow, and frozen, it is not injured, if the frost is gradually abstracted, and it is matured afterwards in the keeping and ripening room, as already directed. The *Easter Burre* and *Burre Rans* are supposed to be able to endure the same treatment; but the *Vicar of Winkfield* should never be exposed to frost, and needs many days in the warmest part of the ripening room to bring it to full maturity. T.



The Early Joe Apple—Fig. 76.

The Early Joe Apple.—From four years acquaintance with this new and eminently productive summer variety, we have deliberately come to the conclusion, that when in perfect eating order, it is decidedly the most perfect and agreeable table apple we ever had the pleasure of touching. But to be thus excellent, the fruit must be of fresh well ripened specimens, and not those plucked immature, and ripened in the house, or on a railway voyage. A gentleman of veracity, who has long had a bearing tree, assures us that he has seen a man sit down by a basket of this delicious fruit, and taking up one after another, actually eat half a peck before he was aware of what he had done. Indeed, to hazard a mere conjecture, this must have been the identical apple which our friend Downing saw in the hand of Pomona, in his famous dream, that being the only sort which she claimed as superior to the Newtown pippin, which we are sure is excelled by the Early Joe!

This apple is only medium in size, and sometimes inclining to small, flat; sometimes slightly approaching flattish-conical, smooth and regular; light yellow on the shaded side, covered with numerous short broken stripes, which pass into a nearly uniform shade of deep red next the sun, and interspersed with conspicuous white specks. Stalk three quarters of an inch long, in a rather shallow and wide cavity, calyx in a small, even basin. Flesh very fine in texture, exceedingly tender, slightly breaking, very juicy, with a mild, sub-acid, rich, and faultless flavor. Ripens during the last half of the 8th month, (Aug.) The growth of the tree is slow, the young shoots dark color, and while it is a profuse bearer, the fruit is always fair. The figure is an exact impression from a fair-sized specimen on a heavily loaded tree. T.

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Horticultural Exhibition.—The first annual exhibition of the Albany and Rensselaer Horticultural Society took place at the Geological Rooms, Albany, on Saturday, the 11th of September. The display of Fruits, Flowers and Vegetables, was in all respects highly creditable, and even beyond what the most sanguine had anticipated for the first effort. Of *Plums*—a fruit for which this neighborhood is somewhat celebrated—there was a fine show, though it would probably have been better had the exhibition taken place at an earlier day, as many varieties were gone. There were *twenty-six* kinds presented by that veteran cultivator Mr. **Isaac Denniston**—fourteen of which were seedlings produced in his own grounds. Ten of these are yet unnamed, though they are nearly all of superior quality. Mr. **Briggs**, of Schaghticoke, had also a large number of varieties of fine appearance. Of *Peaches*, the show was, for this latitude, unusally good. A sample, presented by Mr. E. P. **Prentice**, of uncommon size and beautiful appearance, believed to be "Bergen's Yellow," attracted much attention. There were some fine seedling peaches presented by Mr. J. K. **Paige**. The "Astor" and "Akin's seedling," by Messrs. **Wilson, Thorburn & Teller**, were fine. Of *Pears*, there were fine specimens of the Bartlett and other autumn varieties, and many later kinds. **Wilson, Thorburn & Teller** presented a sample of the "Sterling pear," a fruit of beautiful appearance, and which we are told is of superior excellence. It is said to have originated near Buffalo.

Dr. H. **Wendell**, Mr. J. **Rathbone**, Dr. **March**, Mr. **Benson**, of Albany; Messrs. **Vail**, **Warren** and others, of Troy; Messrs. **Douw** and **Kirtland**, of Greenbush, showed fine specimens of various fruits.

The "floral designs" of Messrs. **Dingwall, Wilson, Menand, Newcomb** and others, were splendid, and much admired.

The success of this Society, for the first season of its operations, has been very encouraging, and will, we trust, stimulate to increased exertions for the future.

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Salt for Plum Trees.—The request in your Aug. number for information on this subject, induces me to state that last fall I used half a bushel of fine salt round about fifty plum trees at Hudson—varying the quantities according to the size and apparent want of each tree. Not a single tree was injured, but on the contrary they all appear thrifty, and are now loaded with fruit. I also salted three trees in my yard in this city, dividing about a pint of salt between the three. These two are remarkably healthy, and one in particular, which has been gradually failing in consequence of filling in the earth around it. I trimmed and washed the body and limbs with brine, in addition to salting the roots, and the result is a most vigorous growth of young wood. From this experiment I am induced to believe that a discreet and moderate use of salt will be found of decided benefit to plum trees. **Thomas W. Olcott.** *Albany, Aug.* 23, 1847.

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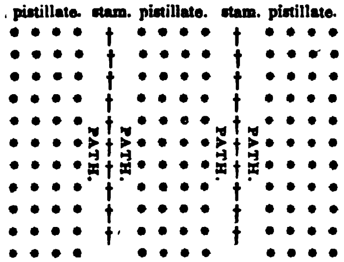
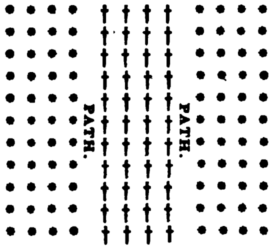
How to Plant Strawberries.—In the last volume of this Journal, we gave a plan for planting strawberry beds so that the smallest number of staminate plants might be introduced into a bed of pistillates, to fertilize them. But a serious objection exists to this mode, the staminates without great care and constant watching, soon intermixing, and in some cases overrunning the pistillates.

To obviate this difficulty, the Horticulturist proposes the following mode of distribution, where the stars represent pistillates, and the daggers staminates. A path between them, prevents the runners from crossing and becoming intermixed:



By this mode, however, a portion of the ground is lost by being devoted to paths, every pistillate bed having two—an item of some consequence in towns where garden ground is scant. However superior pistillates have proved in Ohio for productiveness, there are some fine staminates, as Large Early Scarlet, Ross Phœnix, and others, which farther north, and with good garden culture, have been found quite prolific. Some of the latter, also, are *earlier* than most pistillates. Hence many cultivators are unwilling to do without them. We would propose, in such cases, that instead of adopting the preceding plan, the following be chosen, where entire beds of staminates and pistillates are placed alternately, with a single path between each. If the staminates are of the Large Early Scarlet, and the pistillates are Hovey's Seedling, the former will not only abundantly fertilize the latter, but will of themselves furnish an abundant crop of very early, high flavored, and good-sized fruit, nearly two weeks before Hovey's Seedling is ripe:



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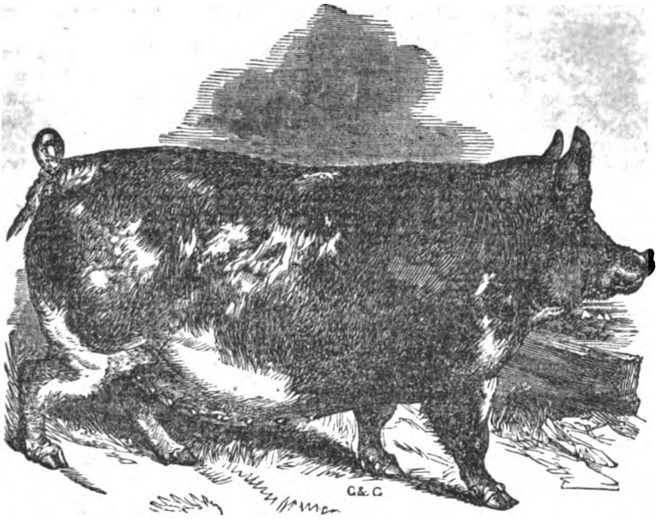
To keep off rose-bugs from Grape-vines.—**David Cole**, of Watervliet, informs us that he has found air-slacked lime scattered on grape-vines, when the dew is on, is an effectual preventive of the attack of the rose-bug. It will even make the insects leave the vines, if they have already attacked them. Perhaps plaster and ashes would answer the same purpose as lime.

YOUATT'S WORK ON THE PIG.

As to the original breeds of England, Mr. Y. observes that they are "rapidly losing all traces of individuality under the varied systems of crossing to which they are subjected." In relation to the "Old English Hog," it is observed—"Where individuals of the pure old breed are met with, they will be found long in limb, narrow in the back, which is somewhat curved, low in the shoulders, and large in bone; in a word, uniting all those characteristics which are now deemed most objectionable, and totally devoid of any approach to symmetry. The form is uncouth, and the face long and almost hidden by the pendulous ears. They nevertheless have their good qualities, though aptitude to fatten does not rank among the number, for they consume proportionally a much larger quantity of food than they repay; but the females produce large litters, and are far better nurses than those of the smaller breeds. They are, however, now nearly extinct, disappearing before the present rage for diminishing the size of the hog, and rendering his flesh more delicate; points which, however desirable to a certain extent, may be carried too far."

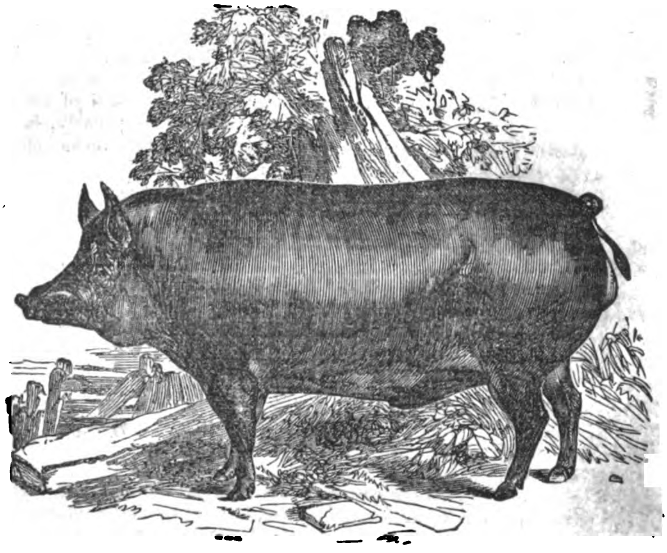


Berkshire Sow.—Fig. 72.

A summary description is given of the breeds which at the present time are deemed most valuable. Among these are mentioned the Lincolnshire, Leicestershire, Essex, Neapolitan, Suffolk, Norfolk, Cheshire, Berkshire, Hampshire, Sussex, and Chinese.

Strictly speaking, none of these breeds can at the present time be considered pure or distinct, having in most cases been produced by various crossings. For instance, the present **Berkshire breed**, fig. 72, appears to be the result of several mixtures with the *old* Berkshire, which was a hog of nearly the largest class. Mr. **Youatt** states that "hogs of the pure original breed have been known to attain to an immense size, and weigh as much as 100 and 120 stone, of eight pounds the stone,"—equal to 800 or 860 lbs. He describes one which is said to have "measured seven feet seven inches from the tip of his snout to the root of his tail, and seven feet ten inches in girth round the centre; five feet round the neck, ten inches round the thinnest part of the hind leg, and two feet across the widest part of the back. He stood three feet nine inches high."

But the breed is not now of an enormous size; "their ordinary weight," says Mr. Y., "averages from 12 to 15 score, and some will at two years old weigh 20 score"—that is 240 to 300, or in the latter case 400 pounds. With a view of lessening the size of the old Berkshires, improving the flavor of their flesh, and rendering it more delicate, they have been crossed with the Chinese, Siamese, and Neapolitan swine; and the produce has a greater aptitude to fatten, but are less hardy than the old stock.



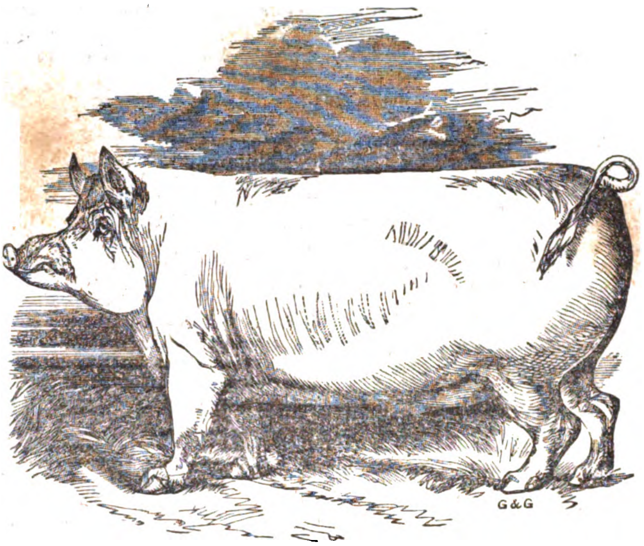
Lord Western's Essex Breed.—Fig. 73.

The **Essex breed**, fig. 73, is one of the most highly esteemed in England. They are said to be indebted for their improvement to various crosses, especially with the Neapolitan and Berkshire breeds. Those most esteemed are entirely black. The late Lord **Western** is believed to have been the great improver of the Essex pigs. It is this family of swine which has attained such celebrity of late years in the hands of W. F. **Hobbs**, Esq., of Marks Hall, Essex. There appears to be a family of the Sussex swine which are similar, if not identical with these, and are said to have been improved by the Western family.

Mr. **Stevens**, author of "*The Book of the Farm*," remarks—"As to the breed which shows the greatest disposition to fatten, together with a due proportion of lean, I never saw one to equal that which was originated by Lord Western, in Essex. I received a present of a young boar and sow of that breed from Lord Panmure, and had the breed for ten years; and such was the high condition constantly maintained by the pigs on what they could pick up at the steading, besides the feed of turneps supplied them daily, that one could be killed at any time for the table as a porkling. They were exceedingly gentle, indisposed to travel far, not very prolific, however; but could attain, if kept on, to a great weight; and so compact in form, and small of bone and offal, that they invariably yielded a greater weight of pork than was judged of before being slaughtered. The offal was smal,l and more delicious ham was never cured than they afforded.

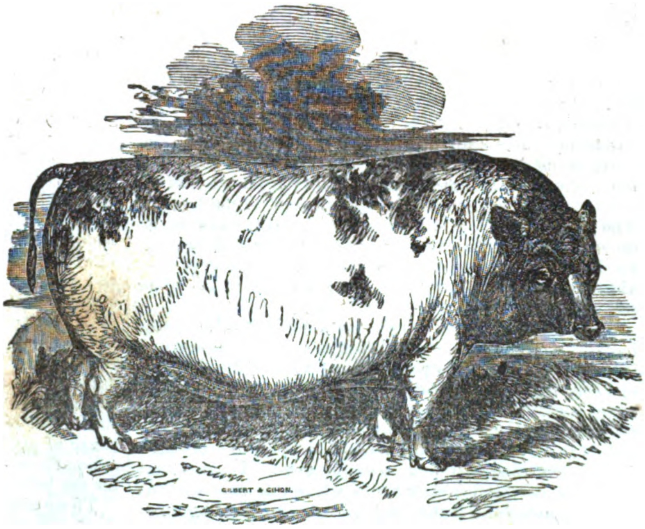
The improved **Suffolk breed**, fig. 74, is spoken of by Mr. **Youatt** in very favorable terms. He says: "On the whole, there are few better breeds to be found in the kingdom, perhaps, than the improved Suffolk pigs; they are well-formed, compact, short-legged, hardy animals, equal in point of value to the best of the Essex, and superior in constitution, and consequently better adapted for general keep, and especially for the cottager. The greater part of the pigs at Prince Albert's farm, near Windsor, are of the improved Suffolk breed—that is to say, the Suffolk crossed with Berkshire and Chinese. They are small in size, with round bulky bodies, short legs, small heads, and fat cheeks. Those arising from the Berkshire and Suffolk are not so well shaped as those derived from the Chinese and Suffolk, being coarser, longer legged, and more prominent about the hips. Many of the improved Suffolks breed well, at a year or fifteen months old, weigh from 12 to 15 or 16 score, [250 to 300 or 320 pounds;] at this age they make fine bacon hogs. The sucking pigs and porkers are also very delicate and delicious."

This is the variety which has been introduced into this country by **Wm. Stickney**, Esq., of Boston, whose fine pigs have frequently been noticed in the public journals.



Improved Suffolk Boa.r—Fig. 74.

Chinese Swine, fig. 75.—The various Asiatic races of swine, have been greatly instrumental in improving the English breeds. The Siamese, as well as several varieties of the Chinese, were long since resorted to for the purpose of lessening the bone and increasing the fattening tendency of the European races. Mr. **Youatt** observes that there are two distinct varieties of the Chinese—"the *white* and the *black*; both," he says, "fatten readily, but from their diminutive size attain no great weight. They are small in limb, round in body, short in the head, wide in the cheek, and high in the chine; covered with very fine bristles growing from an exceedingly thin skin, and not peculiarly symmetrical, for when fat the head is so buried in the neck that little more than the tip of the snout is visible. The pure Chinese hog is too delicate and susceptible of cold ever to become a really profitable animal in this country; it is difficult to rear, and the sows are not good nurses; but one or two judicious crosses have in a manner neutralized it. "This breed will fatten readily and on a comparatively small quantity of food; and the flesh is exceedingly delicate, but does not make good bacon, and is often too fat and oily to be generally esteemed as pork."


GILBERT & GIHON.

The Chinese Breed.—Fig. 75.

The best of the **Lincolnshire breed** appear to be good hogs. Mr. **Youatt** thus describes them:—"The true Lincolnshire pigs are white, with long, straight bodies, round carcasses, fine skins, and few bristles; the heads are well formed and of moderate size, and the ears erect, pointing somewhat forward, and curling slightly at the tips; the hair is long and fine, but scanty. This breed was formerly considered superior to any but the Berkshire in point of form and value, they being easily fattened, and the flesh being tender and of fine flavor; with care they will reach 45 or 50 stone of 14 lbs. to the stone, [700 lbs.;] and many at a year and a half will weigh 25 or 30 stone, [450 to 520 lbs.] They certainly do not attain to their maturity as early as some of the smaller breeds, but are notwithstanding this, profitable animals, and good,

sound, handsome stock. A cross between the Lincoln and Chinese pigs is productive of an animal presenting a great tendency to fatten, and a small eater.

"The old breed of this country, are long-legged, narrow-backed, ungainly animals, with thick skins covered with short, thick hair; the head is large, the forehead wide, and the ears set far apart. They are far from being profitable animals, being enormous eaters and fattening but poorly."

GOV. WRIGHT'S ADDRESS,*

At the Exhibition of the New-York State Ag. Society, Sept. 16, 1847.

Mr. President, and Gentlemen of the State Agricultural Society:—Had it been my purpose to entertain you with a eulogium upon the great interest confided to your care, the Agriculture of the State, I should find myself forestalled by the exhibition which surrounds us, and which has pronounced that eulogy to the eye, much more forcibly, impressively, eloquently, than I could command language to pronounce it to the ear of this assembly.

Had I mistakenly proposed to address to you a discourse upon agricultural production, this exhibition would have driven me from my purpose, by the conviction that I am a backward and scarcely initiated scholar, standing in the presence of masters, with the least instructed and experienced of whom, it would be my duty to change places.

The agriculture of our state, far as it yet is from maturity and perfection, has already become an art, a science, a profession, in which he who would instruct must be first himself instructed far beyond the advancement of him who now addresses you.

The pervading character of this great and vital interest, however; its intimate connection with the wants, comforts, and interests of every man in every employment and calling in life; and its controlling relations to the commerce, manufactures, substantial independence, and general health and prosperity of our whole people, present abundant subjects for contemplation upon occasions like this, without attempting to explore the depths, or to define the principles of a science so profound, and, to the uninitiated, so difficult as is that of agriculture.

Agricultural production is the sub-stratum of the whole superstructure; the great element which spreads the sail and impels the car of commerce, and moves the hands and turns the machinery of manufacture. The earth is the common mother of all, in whatever employment engaged, and the fruits gathered from its bosom, are alike the indispensable nutriment and support of all. The productions of its surface and the treasures of its mines, are the material upon which the labor of the agriculturist, the merchant, and the manufacturer, are alike bestowed, and are the prize for which all alike toil.

The active stimulus which urges all forward, excites industry, awakens ingenuity, and brings out invention, is the prospect or the hope of a market for the productions of their labor. The farmer produces to sell; the merchant purchases to sell; and the manufacturer fabricates to sell. Self-consumption of their respective goods, although an indispensable necessity of life, is a mere incident in the mind impelled to acquisition. To gain that which is not produced or acquired, by the sale of that which is possessed, is the great struggle of laboring man.

Agricultural production is the first in order, the strongest in necessity, and the highest in usefulness, in this whole system of acquisition. The other branches stand upon it, are sustained by it, and without it could not exist. Still it has been almost uniformly, as the whole history of our state and country will show, the most neglected. Apprenticeship, education, a specific course of systematic instruction, has been, time out of mind, considered an indispensable pre-requisite to a creditable or successful engagement in commercial or mechanical pursuits; while to know how to wield the axe, to hold the plow, and to swing the scythe, has been deemed sufficient to entitle the possessor of that knowledge to the first place, and the highest wages in agricultural employment.

A simple principle of production and of trade, always practically applied to manufactures and commerce, that the best and cheapest article will command the market, and prove the most profitable to the producer and the seller, because most beneficial to the buyer and consumer, is but beginning to receive its application to agriculture. The merchant, who, from a more extensive acquaintance with his occupation, a more attentive observation of the markets, better adapted means, and a more careful application of sound judgment, untiring energy and prudent industry, can buy the best and sell the cheapest, has always been seen to be the earliest and surest to accomplish the great object of his class, an independence for himself So the mechanic, who, from a more thorough instruction in the principles and handicraft of his trade, or a more intense application of mind and judgment with labor, can improve the articles he fabricates, or the machinery and modes of their manufacture, and can thus produce the best and sell the cheapest, has always been seen to reach the same advantage over his competitors, with equal readiness and certainty; and that these results should follow these means and efforts, has been considered natural and unavoidable.

Still the agriculturist has been content to follow in the beaten track, to pursue the course his fathers have ever pursued, and to depend on the earth, the seasons, good fortune, and providence, for a crop, indulging the hope that high prices may compensate for diminished quantity or inferior quality. It has scarcely occurred to him that the study of the principles of his profession had anything to do with his success as a farmer, or that what he had demanded from his soils should be considered in connection with what he is to do for them, and what he is about to ask them to perform. He has almost overlooked the vital fact, that his lands, like his patient teams, require to be fed to enable them to perform well, and especially has he neglected to consider that there is a like connection between the quantity and quality of the food they are to receive, and the service to be required from them. Ready, almost always, to the extent of their ability, to make advances for the purchase of more lands, how few of our farmers, in the comparison, are willing to make the necessary outlays for the profitable improvement of the land they have?

These and kindred subjects, are beginning to occupy the minds of our farmers, and the debt they owe to this society for its efforts to awaken their attention to these important facts, and to supply useful and practical information in regard to them, is gradually receiving a just appreciation, as the assemblage which surrounds us, and the exhibitions upon this ground, most gratifyingly prove.

Many of our agriculturists are now vigorously commencing the study of their soils, the adaptation of their manures to the soil and the crop, the natures of the plants they cultivate, the food they require, and the best methods of administering that food to produce health and vigor and fruit; and they are becoming convinced that to understand how to plow and sow and reap, is not the whole education of a farmer; but that it is quite as important to know what land is prepared for the plow, and what seed it will bring to a harvest worthy of the labors of the sickle. Experience is steadily proving that, by a due attention to these considerations, a better article, doubled in quantity, may be produced from the same acre of ground, with a small proportionate increase of labor and expense, and that the farmer who pursues this improved system of agriculture, can, like the merchant and mechanic referred to, enter the market with a better production, at a cheaper price, than his less enterprising competitor.

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* Most of our readers are already apprised of the sudden demise of Gov. Wright, at his residence in Canton, on the 27th of August. This address was completed the evening before his ath, and was read at the Exhibition, by the Hon. John A. Dix.

This change in the agriculture of our state and country, opens to the mind reflections of the most cheering character. If carried out to its legitimate results, it promises a competition among our farmers, not to obtain the highest prices for inferior productions, but to produce the most, the best, and the cheapest of the necessaries of human life. It promises agricultural prosperity, with cheap and good bread, furnished in abundance to all who will eat within the rule prescribed to fallen man, in the sacred volume of the Divine law.

Steady resolution and persevering energy. are requisite to carry forward these improvements to that degree of perfection dictated alike by interest and by duty; and the stimulus of a steady and remunerating market will rouse that resolution and nerve that energy. Without this encouragement in prospect, few will persevere in making improvements which require close and constant mental application, as well as severe physical labor. Agriculture will never be healthfully or profitably prosecuted by him whose controlling object is his own consumption. The hope of gain is the motive power to human industry, and is as necessary to the farmer as to the merchant or manufacturer. All who labor are equally stimulated by the prospect of a market which is to remunerate them for their toil. and without this hope neither mental activity, nor physical energy, will characterize their exertions. True it is that the farmers of our country, as a class, calculate less closely the profits of their labor and capital, than men engaged in most other pursuits, and are content with lower rates of gain. The most of them own their farms. their stocks and farming implements, unencumbered by debt. Their business gives but an annual return. They live frugally, labor patiently and faithfully, and at the close of the year, its expenses are paid from its proceeds, the balance remaining being accounted the profits of the year. Although a moderate sum, it produces contentment, without a computation of the rate per cent. upon the capital invested, or the wages it will pay to the proprietor and the members of his family. The result is an advance in the great object of human labor, and, if not rapid, it is safe and certain It is a surplus beyond the expenses of living, to be added to the estate, and may be repeated in each revolving year.

If, however, this surplus is left upon the hands of the farmer, in his own products, for which there is no market, his energies are paralyzed, his spirits sink. and he scarcely feels that the year has added to his gains. He sees little encouragement in toiling on, to cultivate beyond his wants, productions which will not sell; and the chances are, that his farm is neglected, his husbandry becomes bad, and his gains in fact cease.

To continue a progressive state of improvement in agriculture, then, and to give energy and prosperity to this great and vital branch of human industry, a healthful and stable market becomes indispensable, and no object should more carefully occupy the attention of the farmers of the United States.

Deeply impressed with the conviction of this truth, benevolent minds have cherished the idea that a domestic market, to be influenced only by our own national policy, would be so far preferable, in stability and certainty, to the open market of the commercial world, as to have persuaded themselves that a sufficient market for our agricultural products is thus attainable. It is not designed to discuss the soundness of this theory, where it can be reduced to practice; but only to inquire whether the state of this country, the condition of its society, and the tendency and inclination of its population, as to their industrial pursuits, are such, at the present time, or can be expected to be such for generations yet to come, as to render it possible to consume within the country the surplus of the productions of our agriculture. The theory of an exclusively domestic market for this great domestic interest, is certainly a very beautiful one, as a theory, and can scarcely fail to strike the mind favorably upon a first impression. Still, examination has produced differences of opinion between statesmen of equal intelligence and patriotism, as to its influences upon the happiness and prosperity of a country and its population. Any examination of this question would lead to a discussion properly considered political, if not partisan, and all such discussions it is my settled purpose to avoid, as inappropriate to the place and the occasion.

I simply propose to inquire as to a fact. which must control the application of theories and principles of political economy touching this point, to our country and its agricultural population, without raising any question as to the wisdom of the one. or the soundness of the other. Is the consumption of this country equal to its agricultural production, or can it become so within any calculable period of years? How is the fact? May I not inquire without giving offence. or transcending the limits I have prescribed for myself in the discussion? Can a fair examination. scrupulously confined to this point, take a political bearing, or disturb a political feeling? It is certainly not my design to wound the feelings of any member of the society, or of any citizen of the country; and I have convinced myself that I may make this inquiry, and express the conclusions of my own mind as to the result, without doing either. If I shall prove to be in error, it will be an error as to the fact inquired after, and not as to the soundness of the principle in political economy dependent upon the fact for its application, because as to the soundness of the principle, I attempt no discussion and offer no opinion. It will be an error as to the applicability of a theory to our country, and not as to the wisdom or policy of the theory itself, because of the soundness, or unsoundness of the theory, when it can be practically applied, I studiously refrain from any expression, as inappropriate here. With the indulgence of the society, I will inquire as to the fact.

Our country is very wide and very new. It embraces every variety of climate and soil most favorable to agricultural pursuits. It produces already almost every agricultural staple, and the most important are the ordinary productions of extensive sections of the country, and are now sent to the markets in great abundance.

Yet our agriculture is in its infancy almost everywhere, and at its maturity nowhere. It is believed to be entirely safe to assume that there is not one single agricultural county in the whole Union, filled up in an agricultural sense—not one such county which has not yet land to be brought into cultivation, and much more land, the cultivation of which is to be materially improved, before it can be considered as having reached the measure of its capacity for production. If this be true of the best cultivated agricultural county in the Union, how vast is the proportion of those counties which have entire townships, and of the states, which have not merely counties, but entire districts, yet wholly unpeopled, and unreclaimed from the wilderness state?

When to this broad area of the agricultural field of our country, we add our immense territories, organized and unorganized, who can compute the agricultural capacities of the United States, or fix a limit to the period when our surplus agricultural productions will increase with increasing years and population? Compare the census of 1830 and 1840 with the map of the Union, and witness the increase of population in the new states, which are almost exclusively agricultural, and who can doubt the strong and resistless inclination of our people to this pursuit?

Connect with these considerations of extent of country, diversity of soils, varieties of climate, and partial and imperfect cultivation, the present agricultural prospects of this country. Witness the rapid advances of the last dozen years in the character of our cultivation, the quality and quantity of our productions from a given breadth of land, and the improvements in all the implements by which the labor of the farmer is assisted and applied. Mark the vast change in the current of educated mind of the country, in respect to this pursuit; the awakened attention to its high respectability as a profession, to its safety from hazards, to its healthfulness to mind and body, and to its productiveness. Listen to the calls for information, for education, upon agricultural subjects, and to the demands that this education shall constitute a department in the great and all pervading system of our common school education, a subject at this moment receiving the especial attention, and being pressed forward by the renewed energies of this society. Behold the numbers of professors, honored with the highest testimonials of learning conferred in our country, devoting their lives to geological and chemical researches calculated to evolve the laws of nature connected with agricultural production. Go into our colleges and institutions of learning, and count the young men toiling industriously for their diplomas, to qualify themselves to become practical and successful farmers, already convinced that equally with the clerical, the legal, and the medical professions, that of agriculture requires a thorough and systematic education, and its successful practice the exercise of an active mind devoted to diligent study.

Apply these bright, and brightening prospects to the almost boundless agricultural field of our country, with its varied and salubrious climate, its fresh and unbroken soils, its cheap lands and fee simple titles, and who can hope, if he would, to turn the inclinations of our people from this fair field of labor and of pleasure? Here the toil which secures a certain independence is sweetened by the constant and constantly varying exhibitions of nature in her most lovely forms, and cheered by the most benignant manifestations of the wonderful power and goodness of Nature's God. Cultivated by the resolute hands and enlightened minds of freemen, owners of the soil, properly educated, as farmers, under a wise and just administration of a system of liberal public instruction, should and will be, and aided by the researches of geology and chemistry, who can calculate the extent of the harvests to be gathered from this vast field of wisely directed human industry?

The present surplus of bread-stuffs of this country, could not have been presented in a more distinct and interesting aspect than during the present year. A famine in Europe, as wide-spread as it has been devastating and terrible, has made its demands upon American supplies, not simply to the extent of the ability of the suffering to purchase food, but in superadded appeals to American sympathy in favor of the destitute and starving. Every call upon our markets has been fully met, and the heart of Europe has been filled with warm and grateful responses to the benevolence of our country, and of our countrymen, and yet the avenues of commerce are filled with the productions of American agriculture. Surely the consumption of this country is not now equal to its agricultural production.

If such is our surplus in the present limited extent and imperfect condition of our agriculture, can we hope that an exclusive domestic market is possible, to furnish a demand for its mature abundance? In this view of this great and growing interest, can we see a limit to the period, when the United States will present, in the commercial markets of the world, large surpluses of all the varieties of bread-stuffs, of beef, pork, butter, cheese, cotton, tobacco, and rice, beyond the consumption of our own country? And who, with the experience of the last few years before him, can doubt that the time is now at hand, when the two great staples of wool and hemp will be added to the list of our exportations?

These considerations, and others of a kindred character, which time will not permit me to detail, seem to me, with unfeigned deference, to prove that the agriculture of the United States, for an indefinite period yet to come, must continue to yield annual supplies of our principal staples, far beyond any possible demand of the domestic market, and must therefore remain, as it now is and has ever been, an exporting interest. As such, it must have a direct concern in the foreign trade and commerce of the country, and in all the regulations of our own and of foreign governments which affect either, equal to its interest in a stable and adequate market.

If this conclusion be sound, then our farmers must surrender the idea of a domestic market to furnish the demand, and measure the value of their productions, and must prepare themselves to meet the competition of the commercial world in the markets of the commercial world, in the sale of the fruits of their labor. The marts of commerce must be their market, and the demand and supply which meet in those marts must govern their prices. The demand for home consumption, as an element in that market, must directly and deeply interest them, and should be carefully cultivated and encouraged, while all the other elements acting with it, and constituting together the demand of the market, should be studied with equal care, and, so far as may be in their power, and consistent with other and paramount duties, should be cherished with equal care.

Does any one believe, that for generations yet to come, the agricultural operations of the United States are to be circumscribed within narrower comparative limits than the present; or that the agricultural productions of the country are to bear a less ratio to our population and consumption than they now do? I cannot suppose that any citizen, who has given his attention to the considerations which have been suggested, finds himself able to adopt either of these opinions. On the contrary, I think a fair examination must satisfy every mind that our agricultural surplus, for an indefinite future period, must increase much more rapidly than our population and the demand for domestic consumption. This I believe would be true without the efforts of associations, such as this, to improve our agriculture. The condition of the country, and the inclination and preference of our population for agricultural pursuits, would render this result unavoidable; and if this be so, when the impetus given to agricultural production by the improvements of the day; the individual and associated efforts constantly making to push forward these improvements with an accelerated movement; the mass of educated mind turned to scientific researches in aid of agricultural labor; the dawning of a systematic and universal agricultural education; and the immense bodies of cheap, and fresh, and fertile lands, which invite the application of an improved agriculture, are added to the account, who can measure the extent or duration of our agricultural surplus, or doubt the soundness of the conclusion, that the export trade must exercise a great influence upon the market for the agricultural productions of the country for a long series of years to come?

Such is the conclusion to which my mind is forced, from an examination of this subject, in its domestic aspect simply; but there is another now presented of vast magnitude and engrossing interest, and demanding alike from the citizen and the statesman of this republic, the most careful consideration. All will at once understand me as referring to the changes and promises of change in the policy of the principal commercial nations of the world, touching their trade in the productions of agriculture. By a single step, which was nothing less than commercial revolution, Great Britain practically made the change as to her trade; and subsequent events have clothed with the appearance of almost super-human sagacity, the wisdom which thus prepared that country to meet the visitation of famine, which has so soon followed, without the additional evil of trampling down the systems of law to minister to the all-controlling necessities of hunger. Changes similar in character, and measurably equal in extent, though in many cases temporary in duration, have been adopted by several other European governments, under circumstances which render it very doubtful how soon, if ever, a return will be made to the former policy of a close trade in the necessaries of human life.

New markets of vast extent and incalculable value, have thus been opened for our agricultural surplus, the durability and steadiness of which it is impossible yet to measure with certainty. It is in our power to say, however, that a great body of provocations to countervailing restrictive commercial regulations, is now removed, in some instances permanently, and in others temporarily in form; and it would seem to be the part of wisdom, for the agriculture of this country, by furnishing these markets to the extent of the demand, with the best articles, at the fairest prices, to show to those countries, and their respective governments, that reciprocal commercial regulations, if they offer no other and higher attractions, present to their people a safeguard against starvation.

Such is the connection, now, between our agriculture and the export trade and foreign market, and these relations are to be extended and strengthened, rather than circumscribed and weakened, by our agricultural advances. The consumption of the country is far short of its production, and cannot become equal to it within any calculable period. On the contrary, the excess of production is to increase with the increase of population and settlement, and the improvements in agriculture and agricultural education. These appear to me to be facts, arising from the condition of our country, and the tastes and inclinations of our people, fixed beyond the power of change, and to which theories and principles of political economy must be conformed, to be made practically applicable to us.

The American farmer, then, while carefully studying, as he should not fail to do, the necessities, the wants and the tastes of all classes of consumers of his productions in his own country, must not limit his researches for a market within those narrow bounds. He must extend his observations along the avenues of commerce, as far as the commerce of his country extends, or can be extended, and instruct himself as to the necessities, and wants and tastes of the consumers of agricultural productions in other countries. He must observe attentively the course of trade, and the causes calculated to exert a favorable or adverse influence upon it; watch closely the commercial policy of other countries, and guard vigilantly that of his own; accommodate his productions, as far as may be, to the probable demands upon the market, and understand how to prepare them for the particular market for which they are designed. Next to the production of the best article at the cheapest price, its presentation in the market in the best order and most inviting condition, is important to secure to the farmer a ready and remunerating market.

So long as our agricultural shall continue to be an exporting interest, these considerations, as second only to the science of production itself, will demand the careful attention and study of our farmers, and in any well digested system of agricultural education, its connection with manufactures and the mechanic arts, with commerce, with the commercial policy of our own and other countries, and with the domestic and foreign markets, should hold a prominent place. A thorough and continued education in these collateral, but highly necessary branches of knowledge to the farmer, will prove extensively useful to the American citizen, beyond their application to the production and sale of the fruits of his labor. They will qualify him the more safely and intelligently to discharge the duties of a freeman; and, if called by his fellow citizens to do so, the more beneficially to serve his state and country in legislative and other public trusts.

I hope I may offer another opinion in this connection, without giving offence, or tresspassing upon the proprieties of the place and occasion. It is that this education in the just and true connection between the agricultural, the commercial, and the manufacturing interests of our country, equally and impartially disseminated among the classes of citizens attached to each of these great branches of labor, would effectually put an end to the jealousies too frequently excited; demonstrating to every mind, so educated, that, so far from either being in any degree the natural antagonist of the other, they are all parts of one great and naturally harmonious system of human industry, of which a fair encouragement to any part is a benefit to all; and that all invidious and partial encouragement to any part, at the expense of any other part, will prove to be an injury to all. The education proposed will do all that can be done to mark the true line between natural and healthful encouragement to either interest, and an undue attempt to advance any one, at the expense of the united system, merely producing an unnatural and artificial relation and action, which cannot fail to work disease and injury.

The labors of this society, and of kindred associations, have done much to inform the minds of our farmers in these collateral branches of knowledge useful to them, and much remains to be done. The science of production claims the first place, and is a wide field, as yet so imperfectly cultivated as to afford little time for collateral labors. To secure a stable and healthful market, and to learn how to retain and improve it, also opens an extensive field for the mental labors and energies of the farmer. Between these objects the relation is intimate and the dependence mutual. The production makes the market, and the market sustains the production. The prospect of a market stimulates to activity in the field of production, and the fruits of that activity urge the mind to make the prospect real. Success in both contributes to the health and vigor and prosperity of agriculture, and of that prosperity commerce and manufactures cannot fail largely to partake.

All are willing to promote the cause of agriculture in our State and country. Most are ready to lend an active co-operation, and all are cheerful to see accomplished any valuable improvement in this great branch of productive industry The difficulty hitherto has been in adopting any general plan to effect this desirable object. Hence, most usually, when the public mind has been awakened to the subject, arbitrary, and in many cases visionary experiments have been introduced, based upon no philosophical investigation of cause and effect, but upon some accidental trial, by a single individual, of some novel mode of culture, which, under the circumstances attending the experiment, has met with success. This single experiment, without an enquiry into, or a knowledge of the cause which, in the given case, has secured the successful result, is at once recommended as an infallible rule of husbandry. The publication and dissemination of detached experiments of this character, for a long period, constituted the most material additions to the stock of literary information connected with agriculture, supplied to our farmers; while many of the experiments were too intricate and complicated to be reduced to practice with any certainty of accuracy, and others were so expensive that the most perfect success would not warrant the outlay.—Unsuccessful attempts to follow the directions given for making these experiments, brought what came to be denominated "book farming," into great disrepute with the industrious, frugal and successful farmers of the country, and excited a jealousy of, and a prejudice against this description of information upon agricultural subjects, which it has cost years of patient and unceasing effort in any measure to allay, and which are not yet removed.

In the mean time geological research, heretofore principally confined to investigations into the mineral kingdom proper, has been extended to its legitimate office, and has brought within its examinations the formation of the various soils, and their minute constituent parts. Chemistry has commenced where geology closed, and by a careful analysis of these constituents of the various soils, of the principal agricultural products, and of the usual manures, is laboring to establish upon philosophical principles, the true relations between the soil and the manure to be applied, and between both and the crop to be planted and produced. It is seeking out, with rapid success, the appropriate food of the various vegetables cultivated by the farmer, the soils and manures in which the food for each is found, and the way in which it may be most successfully administered. So with the food of the domestic animals, and the most economical manner of feeding it.

These investigations are the reverse of the former system of arbitrary experiments. There a result was made to justify the arbitrary means adopted to produce it. Here causes are ascertained, and, being so ascertained, are relied upon to produce their natural effect, which effect is the result sought.

The importance of this great subject is effectually arousing the attention of the literary and scientific men of the country, and the success already experienced is drawing to these researches minds qualified for the labor, and energies equal to its rapid advancement. The progress made is bringing together the unsettled mind of the country, and producing the very general impression that the time has arrived when the foundations of a systematic, practical agricultural education should be laid, and the superstructure commenced.

It is universally conceded that agriculture has shared but lightly in the fostering care and government patronage which have been liberally extended to commerce and manufactures, nor is it believed that additional public expenditure is necessary to enable the State to do all that can reasonably be required of it, to accomplish this great object. Our educational funds are rich, and the colleges, academies and common schools of the State share liberally in the distributions from them, while a Normal School, for the education of teachers, instituted at the seat of government, is also mainly supported from these funds. These institutions present the organization, through which, perhaps better than through any independent channel, this instruction can be universally disseminated among the agricultural population of the State. The annual additions to the school district libraries may be made with reference to this branch of education, and thus place within the reach of all the discoveries as they progress, and the rules of husbandry deduced from them, as they shall be settled and given to the public from the pens of the competent professors engaged in pursuing the researches.

This society, and like associations, may, through appropriate committees, their corresponding secretaries, public spirited commercial men, and otherwise, collect and embody in their transactions, facts and information respecting the markets, foreign and domestic; the present and probable supply of agricultural products; the mode and manner of presenting the principal productions in the various markets in the most acceptable form; the state and prospects of trade at home and abroad, and the changes present and prospective in the commercial policy of our own and other countries, with the probable influences upon the agricultural market. The commercial and agricultural press will doubtless come powerfully to the aid of the associations, in all efforts of this character, and having these great objects in view.

In this way the foundation may be gradually laid, and the materials collected for the commencement of those agricultural studies, which time and application, with the constant evidence of their utility in practice, would ripen into a system, to be engrafted upon the course of regular studies pursued in the colleges, academies and common schools, and made a branch of the studies of the male classes in the Normal School, placed under the superintendence of an instructor selected for the purpose, and qualified to prepare his classes for teaching the studies in the common schools of the State.

Thus a generation of farmers would soon come forward, well educated in the great and essential principles of agricultural production; in the true relations existing between agriculture, commerce and manufactures, and in the adaptation and preparation of their products for the agricultural markets. Such farmers, with the continued aid of the schools in which they were taught, would become the best manual labor instructors for their successors.

The passage of time reminds me that I am extending these remarks beyond the proprieties of the occasion and the patience of my audience. A single reflection shall close them.

However confidently the opinion may be entertained that other circumstances and relations might present a prospect for the agriculture of our state and country more stable, independent and flattering, certain it is, that the future here opened is full of cheering promise. We see in it the strongest possible security for our beloved country, through an indefinite period, against the scourge of famine. Our varied soil and climate and agriculture double this security, as the disease and failure of any one crop will not, as a necessary consequence, reduce any class of our population to an exposure to death from hunger. We see also, in addition to feeding ourselves, that our surplus is almost, if not altogether, sufficient, if faithfully and prudently applied, even now to drive famine from the length and breadth of Europe. And that it is in our power, by faithful mental and physical application, soon to make it equal to the expulsion of hunger from the commercial world. We see that, dependent upon the commercial markets, our agriculture may bring upon our country a high degree of prosperity, and enable us, when extraordinary occasions shall call for its exercise, to practice a national benevolence as grateful to the hearts of the humane as to the wants of the destitute. And we see that by the wider diffusion and more secure establishment of a successful agriculture among our citizens, as a permanent employment, we are laying broader and deeper the foundations of our free institutions, the pride and glory of our country, and prized by its freemen as their richest earthly blessing; the history of all civil government, confirmed by the experience of this republic, furnishing demonstrative proof that a well educated, industrious, and independent yeomanry, are the safest repository of freedom and free institutions.

ANSWERS TO INQUIRIES.

Coal Ashes for Manure.—M., Allegany Co., Pa. So far as our observation goes, coal ashes are not a very valuable manure; we think they do, however, generally produce some benefit. On heavy soils, their mechanical effect is favorable in making the soil more open. Sometimes they contain iron and sulphur in so large quantities as to render their application injurious to vegetation. Mixing them with fresh lime or strong wood ashes, might in such cases be useful.

Cider Mill—Machine for Paring Fruit—Dry-House.—S., Lynchburgh, Va. Perhaps **Boothe's** mill, for cut and description of which see Cultivator, vol. VII., p. 109, might answer your purpose. For a paring-machine see an article in our last number, page 289. For drying peaches, &c., Mr. **Thos. Bellanger**, of Egg Harbor, New-Jersey, (according to the *Am. Farmers' Encyclopedia*,) has a small house provided with a stove, and drawers in the house lathed at their bottoms, with void intervals. "The peaches," it is said, "should be ripe, and cut in two, not peeled, and laid in a single layer on the laths, with their skins downwards, to save the juice. On shoving in the drawer they are soon dried by the hot air produced by the stove. In this way great quantities may be successfully, in a single season, be prepared, with a very little expense, in the preparation of the building, and in fuel."

Hydraulic Ram.—Having noticed in the August Cultivator, some inquiries, made by E. H. Weeks, in relation to the durability and ability of our hydraulic ram, I answer—there need be no better situation for the well-performing of the ram, than 12 feet fall to 75 feet rise; one-sixth of the water used can be raised to that elevation. Logs are never used, because lead pipe is in all cases considered much cheaper. The sizes of the pipes used are these: For ordinary purposes, 1¼ inch driving pipe, ¼ inch discharge; therefore, if logs can be bored so small and smooth as lead pipes are, they will answer the purpose, and not without. The rams are warranted to last, and operate as long as they are kept in order. **Farnham & Brown.** *No. 194½ Market-St., Philadelphia.*

ANNUAL EXHIBITION OF THE N. Y. STATE AG. SOCIETY.

The seventh exhibition of the New-York State Agricultural Society, took place at Saratoga, on the 14th, 15th, and 16th of September. The weather was fine, and the occasion drew together a very large crowd, though the numbers which entered the show-grounds were considerably less than on some previous occasions. The receipts, we believe, show a falling off of about $700 from last year.

The site for the show was a good one—the enclosure was spacious, the buildings commodious, and all the arrangements very complete. In comparing the exhibition with former ones, it may be said that in most of the departments there was a decided deficiency. The show of Implements and Machinery was equal if not superior to that of any previous exhibition of the Society; the articles were numerous, and in general of a superior character. Of stock, the display of horses, including those from other states, was good; but in all other classes of animals, the show was far behind those which have preceded it. There was also a striking deficiency in the department of Dairy Products, Household and Domestic Manufactures, Vegetables, &c. Of Fruit, there was a large display of plums, but in other respects we thought this department by no means as full as usual. The Floral display may be said to have been fine, considering the lateness of the season. The ornamental arrangements and fixtures, for the show of fruits and flowers, which were executed under the direction of Dr. Thompson, of Aurora, were of the most perfect description, and elicited high praise.

It may be proper to remark that this exhibition ought not to be considered a fair indication of the agricultural or other products of the state of New-York; neither should its deficiencies be attributed to any lack of interest among the people generally, in those objects which it is the design of the Society to promote. The location was evidently unsuitable, on account of the inconvenience of reaching it with stock and heavy articles. We are confident that the spirit of emulation and desire for improvement was never so fully awakened and widely diffused as at the present time; and we are certain that under favorable circumstances, a manifestation highly creditable to the industrial resources of the state would have been made.

We submit the following brief notices of articles and animals exhibited:

Implements.—In this department we noticed a cultivator or scarifier of quite peculiar construction, presented by A. Van Bergen, Esq., which we have no doubt will prove a very useful implement in the cultivation of crops. The same gentleman also presented a Scotch cultivator, made wholly of wrought iron, which is capable of doing excellent work. He had also on the ground an improved subsoil plow, constructed especially with reference to its being used as a draining-plow on grass-lands, and which would make a considerable cavity in the soil, and yet leave the sward smooth and apparently undisturbed.

There were several wheel cultivators which appeared well calculated to work to advantage. We noticed particularly Odell's, Ide's, and Patterson's. The first of these, being jointed in the middle and having three wheels, we thought would operate very well.

Hussey's "harvesting machine" was on the ground. It is every year getting more into favor. Ketchum's "mowing machine" was also exhibited. It is similar to the "harvester," but is calculated to run closer to the ground, and does not require as much force.

Seymour's seed-sower, for broadcast work, seems to be a valuable article. For particulars in regard to it, see our remarks on Mr. Delafild's farming, in the July Cultivator.

There were several machines, to be worked by horse-power, for sowing different kinds of grains and seeds in drills. That patented and manufactured by S. & M. Pennock, Chester, Pa., appeared to be a useful and efficient machine. With two horses and one man, it is stated that from eight to fourteen acres of wheat can be sown per day, according to the character and condition of the ground. It will sow eight rows at a time about a foot apart, and by a simple contrivance, any row or number of rows can be stopped in an instant, and the foot which makes the furrow is raised from the ground. Thus, at pleasure, the number of rows and their distances apart are regulated. The machine may also be used to good advantage, with the sowing apparatus out of gear, as a cultivator, for working fallows, &c.

Smith's seed-planter, patented by H. W. Smith, Lancaster, Pa., was presented by C. Masten, Penn Yan, N. Y. It is somewhat more simple in its construction than the one just mentioned, and appears likely to work well. It has been used for several years in Pennsylvania and Delaware, and is well recommended.

Emery's seed-planter, presented by Mr. H. L. Emery, of Albany, has been in use the past season, and is evidently a valuable article. All these machines make a considerable saving of seed and a great saving of labor. We have no doubt that the best of them are destined to come into pretty general use in many parts of the country.

We noticed a "coopering machine" presented by Wm. Trapp, Ithaca, N. Y. It was a very curious machine, and turned out all kinds of barrels, kegs, tubs, &c., in the very best style. Some specimens of its work were shown which were thought superior to anything of the kind wrought in the common way.

Of horse-powers, we saw nothing but what has been before described.

There were several exhibitors of plows, some of which had large assortments. The Agricultural Warehouse, Albany, A. B. Allen & Co., New-York, and Starbuck & Son, Troy, sent large lots. Messrs. Burrall, of Geneva, Delano, of Mottville, Warren, of Troy, and Miner & Horton, of Peekskill, also exhibited plows.

Of stoves, there was as usual, a numerous array, but we saw nothing peculiar among them.

Dairy Products.—The competition in butter and cheese was very limited, and we did not learn the names of many exhibitors. There were fine samples of butter from the dairies of O. C. Crocker, Esq., of Broome county, Mr. B. A. Hall, of New Lebanon, and Mr. Evans, of Oneida county.

Vegetables.—The vegetable show was decidedly meagre, and was besides, made up in part of articles which were brought on the ground for the purpose of feeding the stock.

Fruits.—Of fruits, there were many fine plums, and some fine pears, peaches, and apples. Among the principal exhibitors, we noticed the names of Col. Young, of Ballston, Messrs. Wendell, Wilson, Thorburn, and Teller, of Albany, Reagles, Groot, and others, of Schenectady, and Allen, of Oswego. Dr. Underhill, of Croton Point, showed fine specimens of his grapes.

The articles in the "Ladies' Hall" were comparatively few in number—we cannot speak of the quality, as we did not make a particular examination.

Live Stock.—Under this head the show of horses was decidedly best. There was a large number of stallions, and they were generally superior, but the mares, with few exceptions, were by no means of the best character.

The Morgan horses from New Hampshire and Vermont, made a splendid display, and elicited much admiration. There was Mr. Wier's "*Gifford Morgan*," twenty-one years old, with his noble family of stallions and mares, of various ages, (six in all,) Mr. Hill's "*Black-Hawk*," and some others. The old Gifford pranced in the van of the cavalcade with all the fire, action, and gaiety of a horse of six, instead of *twenty-one* years. He appeared conscious of his honorable position, and seemed to look with the pride of a patriarch on the bold "*Green Mountain Morgan*," and other fine animals which sprung from his loins. We understand that Mr. Wier refused an offer of two thousand dollars for this horse, from some gentlemen in the western part of this state.* The horses of Mr. Hale, of Massachusetts, and Mr. Blodgett, of Vermont, attracted much attention.

Black-Hawk was prevented from being shown in his accustomed plight, on account of lameness caused by an accident, which occurred a few days previous to the show, but which, however, did not prevent his winning a match in trotting, which took place on the Saratoga course, on the 14th. We believe those who saw him, were convinced that he is a horse of uncommon power and great value.

Of horses within the state, we noticed among those for "all work," *Morse's Grey*, owned by Mr. Morse, of Lansingburgh, and a young horse got by him, owned by Mr. Milliman, of Galesville, which took the first premium in this class. Many of the best horses of Rensselaer and Washington counties, were got by Morse's Grey. A pair of beautiful iron greys of this stock, presented by Mr. Eycleshimer, of Washington county, were greatly admired.

Of the blood horses, *Tornado*, by American Eclipse, presented by Mr. E. Long, of Cambridge, Washington county, N. Y., seemed to bear away the palm in the estimation of the spectators. He is a very fine horse—the best we have ever seen of Eclipse's get. *Mogadore*, presented by Mr. Butler, of Wayne county, was a well-made horse, in most parts, and showed excellent action. There were several pair of fine, showy matched horses. A pair owned by Mr. Patten, of Jefferson county, were much praised.

An interesting part of the horse-show, was the appearance of four beautiful and spirited little ponies, two of them ridden by sons of Mr. E. P. Prentice, of Albany, and the others by sons of Mr. J. H. Prentice, of Brooklyn. They galloped over the show ground in fine style,—the good horsemanship of the boys attracting as much attention as their miniature steeds.

Cattle.—The Durhams were much less in number than usual, and generally not of so good a quality; yet there were a few of the very best character. The bull *Marius*, bred in England by the late Earl Spencer, now owned by Messrs. Bell & Morris, of Westchester county, is a capital animal—taking him "all in all," we have never seen his superior. An offer of $400 for this bull, by some Canadian gentlemen, was not accepted. Mr. Vail's *Meteor*, which received the first premium in his class three years ago, was on the ground. He is an excellent bull. Of Durham cows, *Esterville*, presented by Mr. Prentice, of Albany, and *Grace*, presented by Mr. A. Stevens, of New-York, were entitled to rank among the very finest cows of this breed that we have ever seen. Mr. Vail, of Troy, had a numerous delegation from his herd, among which we noticed the cow *Hilpa*, imported from the herd of Thomas Bates, Esq., of Yorkshire, England, and several promising young animals.

In the show of Herefords, we greatly missed the display formerly made by Messrs. Corning & Sotham. Mr. George Clark, of Otsego county, exhibited *Major*, a bull of excellent points and constitution, but too low in flesh to attract general attention. Mr. E. Wells, of Johnstown, exhibited two fine cows and some young stock of this breed.

The Devons were out in considerable force and made a rich show. Mr. Washbon of Butternuts, Otsego county, exhibited twenty full bloods and ten grades. They were driven to the show, a distance of over one hundred miles, in seven and a half days. There was some prime animals among them, and the general condition and appearance of all was first-rate. We understand that Mr. Washbon made sale of several at very satisfactory prices. Messrs. Norfleet and Battle, of North Carolina, and Mr. Hayes, President of the Montreal, Ag. Society, each purchased a beautiful pair of calves.

Some good Ayrshires were exhibited by Mr. Prentice and Mr. Bement. Mr. P.'s yearling bull of this breed, was not surpassed, if equalled, in good points, by any one of his age on the show grounds, including all breeds.

The falling off in the show of working oxen was very obvious. There were no competitors for the premiums offered for the best twenty yoke from any one county, or for the best ten yoke from any one town, and only seven competitors for the premium on the best pair. Mr. Sheldon, of Sennett, Cayuga county, showed two pair of excellent oxen, and a very fine pair of three-year-old steers. Mr. J. S. Wadsworth, of Geneseo, showed several pair of very likely steers. Mr. Jerome, of New Hartford, Connecticut, showed a beautiful pair of three-fourths blood Devons, which were much admired. Had their behavior at a load, been equal to their appearance when not at work, they would have acquired great honor.

The fat cattle were not numerous. We noticed the "Tompkins county steers," so called, owned by Warren Halsey, of Ulysses. Their weight was said to be 6,500 pounds. We thought these equal to any fat cattle of their age, (five years,) that have ever been presented at our shows. In a tent adjoining the show-grounds was a "mammoth ox" from Chautauque county, six years old. Whether he would or not weigh, as his owner alleged, "over 4000 pounds;" he was a coarse ungainly monster, only fit to astonish those who are unacquainted with the proper points of cattle.

Sheep.—The most attractive part of this division of the show was the two imported improved Oxfordshire rams, presented by Mr. Clayton B. Reybold, of Delaware city, Delaware. They are now three years old. About a year ago, one of them weighed 288 pounds, and the other 320 pounds. The lighest one had 17 pounds of wool, and the largest one 12 pounds. Their great size is not more remarkable than their fine form, they are almost models of symmetry. The smaller one is, considered in all respects, the best long-wool sheep we ever saw. They were purchased in England of Mr. Large, the breeder, who has of late carried so many prizes on this description of sheep at the Royal Agricultural Society's shows.

Mr. S. C. Scoville, of Salisbury, Connecticut, present four imported Saxon rams and five imported ewes. They were selected in Germany with great care, by a competent judge. Several of them are certainly very superior animals, both as to shape of carcass and quality of wool. They will be an acquisition to the flocks of this country.

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* He covered eighty mares the past season, at $15 each.

Mr. J. N. Blakeslee, of Watertown, Ct., had on the ground some specimens of his noted Merinos. His flock appears to sustain its reputation.

Mr. Hines, of Brandon, Vt., showed a yearling Merino, and five yearling ewes of the same stock, which were well shaped, remarkably similar in their appearance, and had good fleeces as to weight and quality.

Mr. Chapman, of Middlebury, Vt., who was on his way to Kentucky with about one thousand Merinos, exhibited a few of his flock, among which we observed some very good rams.

The above were all we saw from out of the State.

The show of sheep within the State was by no means equal to former years—it was inferior both in numbers and *general* quality. Of Saxons and Merinos, Messrs. Blackslee, of North Salem, Westchester county, Wilcox & Holmes, of Saratoga, had a *few* good sheep. Of South Downs, Messrs. McIntyre, of Albany, and Wakeman, of Herkimer, showed several ewes which were highly creditable to their flocks. The rams, with the exception of one or two, we thought hardly as good as those gentlemen have generally exhibited at our shows. Mr. McIntyre's cross-bred South Down and Cotswold fat sheep, were first rate.

There was one pen of very fair Leicester sheep, but we did not succeed in finding the name of the owner.

The show of swine was the most inferior we ever saw at any agricultural exhibition. We did not see one first-rate hog, and excepting Mr. Ireland's Spanish boar, so called, it would have puzzled us to pick out a good one.

The *poultry* were but a trifling show. Mr. Henry Vail, of Troy, showed some very good Dorking fowls. There was a coop of very pretty white fowls presented by J. A. Brackett, of Saratoga. Messrs. Mesier, of Dutchess county, presented two pair of their Chinese geese. This handsome variety has been exhibited and noticed at former shows.

The *plowing match* took place near the show ground on the third day. The ground had but a thin sward, and was altogether too light, to afford a fair trial of plows. Many plows will make fair work in loose sandy land, that would be nearly useless on compact soils. The number of competitors was twelve. The plowing was for the most part such as might not be considered objectionable *for such a soil*, but we must say that we noticed but one or two lands that could be considered suitable examples for general plowing. The land marked No. 8, plowed with a Scotch plow, was done handsomely. The furrows were straight, uniform in thickness, level at the bottom, and laid in such a manner that the harrow would operate on them to the best advantage—not thrown over to a dead level, but the corners left highest. Most of the plowing was decidedly too wide in the furrow for common soils.

There was an example of *double* plowing, given by Mr. Bronson, which in many cases might be adapted advantageously. The mode consists in first plowing off the turf by a furrow about two inches in thickness, and then by a simple alteration of the draught, by moving the chain upwards on the clevis, the same plow is run in the same furrow to the depth of six or seven inches, throwing up the soil and leaving it very light and friable—in excellent condition for crops.

The attendance at the fair of gentlemen from abroad was unusually large, and it was a matter of regret that the show did not come nearer to their expectations. Among the company were Ex-Presidents Van Buren and Tyler, Gov. Young, of New York, Judge Baker, of Louisiana, Hon. Mr. McKay, of North Carolina, Col. Allston, of South Carolina, Hon. Mr. Jones, and Mr. Bolling, of Virginia, Col. Capron, of Maryland, Maj. Reybold, of Delaware, Prof. Hare, Mr. Witherell, and others of Pennsylvania, Mr. Newbould, of New Jersey, ex-Governor Hill, of New Hampshire, Hon. H. L. Ellsworth, of Indiana, Hon. Messrs. Papineau, Watts, and Hayes of Canada, besides a numerous delegation of intelligent farmers from the New England States.

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At 12 o'clock on Thursday, a large and imposing audience assembled to listen to the address prepared by Gov. Wright, which, according to the announcement, was to be read by the Hon. John A. Dix. The stage erected for the purpose under large tent in the centre of the grounds, was occupied by the officers of the Society, the Ladies composing the Committee upon household productions, the Governor, State Officers, and such distinguished strangers as were present, among whom were Ex-Presidents Van Buren and Tyler, Gov. Hill, of New Hampshire, and other gentlemen from various sections of the Union.

After an impressive and solemn address to the Throne of Grace, by the Rev. Mr. Chester, the President of the Society introduced Gen. Dix, who prefaced the reading of Gov. Wright's Address with the following remarks :—

Mr. President and Gentlemen of the Society—I have come here, at your request, to perform a melancholy duty—to read to you and to this assembly, the Annual Address prepared for the occasion by Silas Wright. In the order of your proceedings, it was to have been delivered by himself. The providence of God has overruled your arrangements. The voice which was to have been heard by the thousands assembled here, is silenced forever. He, who was to have stood before you, where I now stand, and to have borne a prominent part in your proceedings, has gone down, in the fullness of health and strength, to the tomb. The large space which Mr. Wright filled in the public eye, his great talents, and the moral elevation of his character, render this bereavement a National calamity. The general gloom, which the intelligence of his death carried with it, attests the profound respect, in which he was held by his countrymen, and the strong impression which his character and services had wrought in the public mind.

The admonition contained in these sudden dispensations of Providence is the more solemn, when those, who are conspicuous for their intellect and their virtue, are called from the field of their labor, while they are yet fresh and vigorous, and when the path they tread seems but an avenue to higher distinction. It is thus that the career of Mr. Wright has been terminated, while his faculties were in full vigor, and while much of the high promise of his life was yet to be fulfilled. His death is the more impressive at this time, and in this place, from the peculiar circumstances, by which his name is connected with the proceedings of the day. The intellectual labor in which he had been engaged, at the invitation of the Society, was performed. The address he was to have delivered was completed during the very last hours of his life. Thus, the accomplishment of the task he had undertaken for the Society, may be said to have been coincident with the termination of his earthly career.

I am not here, Mr. President and gentlemen, to pronounce a eulogy on the character or public services of Mr. Wright; but to perform the more humble part of reading to you the address which lies before me—the last labor of his life—and which seems to come as a legacy to the Society, to his friends, and to his countrymen. At the same time, I have thought it might not be inappropriate or unsatisfactory to refer briefly to some of the circumstances attending his decease.

It is well known that Mr. Wright for the last twenty years has held, without interruption, various public trusts requiring incessant mental labor and lending to a habitually sedentary life. In the intervals of his service in the Senate of the United States, from 1833 to 1845, a portion of his time was devoted to the cultivation of his garden and a few acres of land, by his own hands. While Governor of the State, he purchased an additional quantity of land, and when relieved from the duties of the Executive office, he applied himself with great diligence and zeal to the improvement of it. His labor was not merely that of superintendence. He was himself a principal laborer in all his agricultural operations. He hired an able-bodied, hard-working man, and went with him into the field, plowing, mowing and harvesting, performing himself a full share of labor; and after the fatigues of the day, retiring to his study and passing his evenings in reading and in correspondence. To these excessive exertions of body and of mind, and to the too rapid transition from a life of comparative bodily inactivity to one of severe manual labor, is doubtless to be traced the sudden attack, which terminated his existence. I need not dwell upon details, which have been so widely circulated, and are now so generally known. Suffice it to say, that on the morning after he had revised the address, which I am about to read, and after having made a few corrections, leaving it word for word as it now is, and probably precisely what it would have been if he had lived to deliver it himself, he was seized with a severe pain in the breast, at the village post-office, walked calmly to his house with a few friends, and in two hours he had as calmly breathed his last.

Such, gentlemen, were the last hours of Silas Wright! The same calmness, which distinguished him throughout all the changes of his life, accompanied him at its close. From the first moment of his attack he appeared to understand its fatal character, and he submitted to it without a struggle or a murmur.

In him perished one of the purest models of a citizen and a statesman the country contained. He may be said, indeed, to have been an impersonation of the true character of her institutions. In the traditions and legends of early ages, before their eras of legitimate history, their periods are marked by the lines and actions of distinguished parsonages invested with the ruling characteristics of the communities, of which they were intended to be the types. The spirit of the political system is thus illustrated by the individual example. Mr. Wright might have been copied, without any coloring of the imagination, as an exemplification of the genius of ours—of what it is and what it ought to be—of its simplicity, its purity and its strength. Plain and unostentatious in his manners, serene amid all the agitations of life, unambitious of wealth or of honors, singularly courteous and kind in his intercouse with others; equally dignified, whether dealing with the most complex questions of public policy in the Senate Chamber, or when tilling, with Roman simplicity, his own field; he recalled to mind those classical examples of disinterested pariotism and virtue, which gave lustre to the times in which they existed, and which have come down to us consecrated by the memomory of ages.

The close of his life was in harmony with its whole course. It was appropriate that the last labors of his hands should have been performed with the implements of husbandry, and that the last effort of his mind should have been given to the cause of agriculture—a pursuit..to which the great masses his countrymen are devoted, and on which the purity of the body politic and the durability of our social system pre-eminently depend.

With these few remarks, which I could not forbear to make, and for which I trust the occasion will furnish my apology, I proceed to read the Anddress.

[For the Address, see another part of this paper.]

At the conclusion of the reading, the Hon. John A. King, of Queens county, arose and delivered a beautiful and touching eulogium upon the character of Mr. Wright, and the loss which the Society, the State, and the country at large experienced in his death, concluding with the following resolution:—

Resolved, That the eloquent Address which has just been read, be printed; and that the President be requested to ask the permission of Mrs. Wright to retain the original draft of the Address, to be placed in the archives of the Society; and to express to her at the same time, the deep sympathy and regret which is felt by all its members for the irreparable loss which has so suddenly overwhelmed herself and the State in a common grief.

This resolution was seconded by Lewis F. Allen, Esq., of Erie county, who adverted in glowing language to the merits of the Address, in the course of which he characterized it as one that would be regarded and appealed to by the agricultural interests as a model of excellence and the richest legacy which could be bequeathed to them. Mr. Allen concluded his remarks by submitting the following additional resolutions:

Resolved, That in the death of Silas Wright, late Governor of this State, the New-York State Agricultural Society have lost a friend, benefactor, an honored and useful member, and the community an illustrious example of republican simplicity in private, as well as of inflexible honesty, and great capacity in public life.

Resolved, That a committee of this society, be appointed by the President thereof, to prepare a brief memoir illustrative of his character, his virtues, and his eminent public services, for publication with the address delivered on this occasion in the Transactions for the year 1847—a duty the more gratefully performed, as the last public act of his life was one of beneficence to the farmers of his country.

The president then put the question upon the several resolutions, and they were adopted by acclamation.

On motion it was likewise resolved that copies of the remarks of Gen. Dix, Mr. King, and Mr. Allen, be solicited from the speakers, and that they be published in connection with the address, by the Society, and entered upon its minutes.

The reports of the several committees were then read, and the premiums awarded to the successful competitors.

It was our intention to have published this month, a full report of the premiums awarded, but unfortunately, we have not been able to procure it, and our readers must therefore wait till next month for it.

BERKSHIRE SWINE.

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Messrs. Editors.—A short account of our unsuccessful efforts with the Berkshire swine in this section of country, may be interesting to some of the numerous readers of the Cultivator. They were pretty extensively introduced into this part of the country. I think, according to your description of the different sizes, that those brought here were principally the medium size, with "soft hair, thin skin," &c.; and on the whole were the most beautiful animals of their species I ever beheld. We obtained them at very moderate prices, compared with what was paid for them in the north; this made our losses light in this respect. They at first bid fair to do well; all appeared pleased with them, and anxious to obtain them; even some of our anti-book farmers, who had heretofore opposed all innovations of the kind, were forced to acknowledge that there "might be something in breeds after all." Many of us believed that we had hit upon a short cut to perfection in the improvement of our breed of swine—that for the future we had nothing to do but receive the profits arising from the increased value of our improved stock; but we were soon "led into a truer way of thinking." *Degenerate* they would and did, in spite of all we could do. I was extremely loath to give them up, they were so beautiful, and continued so long as I kept them sufficiently prolific. I gave them extra feed and attention, and I continued my efforts several years, hoping, if anything depended on the climate, that after becoming acclimated they would do better; but all my efforts proved unavailing, and I was forced to give them up.

I will particularize one instance: In the fall of 1845 I fattened eighty hogs, all pretty deeply mixed with the Berkshire, some of them full blood; they were from twelve to eighteen months old when fattened. The winter previous they were fed on corn, and although not lavishly fed, yet their keeping might be considered *good*. They were never poor—always plump and fleshy. In the spring they looked well, and were considered by all who saw them a pretty lot of small hogs. They run on well during the summer—had no grain, but an abundance of clover. In the fall I fed them about 2½ months with corn—the principal part of the time as much as they would eat. The average weight, when I sold them, was 120 lbs. This I suppose you would call a small business.

Such is my experience, and I find it accords pretty nearly with the experience of all with whom I have conversed on the subject. It may be proper to state that this was the heaviest failure I ever experienced. Previous to this they had done a little better. After this I disposed of them as soon as possible.

The principal objection to the Berkshires in this vicinity, is their size. Could we have realized the weights *complained* of by your correspondent in the February number, we should have been fully satisfied. The most desirable weights with us are from 200 to 250 lbs. Our pork is made into bacon, either by the farmers at home, or sold to speculators, who drive it to market for that purpose. In either case the above weights are preferred as making the most saleable article; but especially in the latter case, as being the best travellers.

So you will perceive that the breed of swine that suits us best, is such as will, at from twelve to eighteen months old, attain these weights with the least expenditure of food. The question now is, how will this failure affect us? Shall we become discouraged and cease our efforts, or shall we endeavor to profit by the past, and persevere until we gain the desired object? I hope the latter course will be adopted. J. W.

Mt. Clinton, Va., 1847.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received, since our last, from Schuyler Worden, M. Quinby, M., Wm. R. Prince, R. T., J. W., Ik Marvel, Wardwell, Farnham & Brown, F. A. Sayres, J. B. M'Clelland, Chemical Student, P., H. A. W., P., Subscriber, D. A. Ogden.

☞ Several communications intended for this No., are delayed, to make room for Gov. Wright's Address.

Books, Pamphlets, &c., have been received as follows:

The Agricultural Magazine and Farmer's Journal, London, from F. Crisp, Esq., editor. The last No. was accompanied by a dozen beautifully executed lithographic prints of domestic animals, for which Mr. C. will accept our thanks.——*Commerce and Navigation of the Mississippi*, as also that appertaining to the city of St. Louis, a very valuable pamphlet of 32 pages, by Thomas Allen, Esq., from the author.——*Catalogue of the Ashton Nurseries* of Thomas Hancock, near Burlington, N. J.——*Constitution of the Chicago Hort. Society*, with lists of officers and members.——*Transactions of the Highland Ag. Society* of Scotland, from the Society.——*The Transactions of the Mass. Hort. Society*, for 1843-4-5-6, from B. V. French, Esq., Vice President of the Society.——*Dombey and Son*, Parts 10 and 11, illustrated edition, from the publishers, Lea & Blanchard, Philadelphia.——*History of the Press of Western New-York*, by Fred. Follett, Esq., copies from L. H. Redfield, Esq., Syracuse, and D. T. T. Moore, Esq., Rochester.——*Norman's Southern Agricultural Almanac*, for 1848; edited by Thos. Affleck, Esq., an admirable work of the kind, devoted exclusively to the Agricultural interests of the South.

Queens Co. Agricultural Society.—The annual exhibition of this society is to be held at Hempstead on the 8th inst. The Prize List is very extensive, and cannot fail to draw out a large array of live stock, dairy products, grains, farm implements, vegetables, fruits, flowers, &c. The address will be delivered by Dr. Stevens of New-York.

Imported Leicester Ram.—We lately saw a superior Leicester ram, belonging to Richard Ferris, Esq., of Eaton Rapids, Michigan. This fine animal was imported last December, by Dr. F. T. Ferris, of New-York, a brother of the gentleman above-named. On the 28th of May last, this ram yielded fifteen pounds of wool, (unwashed.) He is three years old, and is estimated to weigh 225 pounds. We trust he will arrive safe at Mr. F.'s farm in Michigan, where we have no doubt he will prove useful in increasing the size, early maturity, and fattening tendency of the sheep of that section.

Substitute for Hoops in Baleing Hay.—Mr. Cornelius H. Vanderzee, of Coeymans, wishes to know whether any substitute for hoops, in baling hay, could be used to advantage. Has any one tried the outer fibre of the sun-flower? Or is there any other plant, or any tree, the outer coating or bark of which has been found useful in this or a similar business? It is proper to state that for hay, an article would be required of equal strength to a common rope of hemp or manilla, of half an inch in diameter.

Fine Wooled Sheep.—Among our advertisements will be found that of Mr. Smith, for the sale of his sheep. The following paragraph from a letter of his, furnishes an account of the origin of his flock. Some samples of wool forwarded to us, are of extra quality: "Upwards of twenty years ago, I purchased three full-blooded Merino ewes, for which I paid thirty-five dollars. They were descended from Col. Humphrey's flock, of Connecticut. With these, and a selection from my father's flock, which at that time was one of the best in the country, I commenced the business of breeding fine-wooled sheep. About this time the Saxon fever commenced, and I procured the best Saxony bucks to use for my sheep, having especial regard to the fineness of the fleece. I bred from Saxon bucks until I found that my fleeces averaged but 2 lbs. 10 oz. of wool, and the constitution of the sheep was greatly enfeebled. For about twelve years past I have bred from heavy fleece bucks of good constitution and fineness of fleece. With these bucks I have raised the weight of the fleeces of my whole flock to 4lbs. 4 oz. per head, and I anticipate with my present buck to bring them up to five pounds per head. My lambs for two seasons past, have averaged 4¼lbs. My sheep at present are very hardy, and it is very seldom I lose one."

Fine Fruit.—We are indebted to Mr. D. B. Kirtland, of the Cantonment Farm, Greenbush, for very fine samples of Skillman's melon, two samples of superior peaches, specimens of the Imperial gage plum, and a very good seedling plum of his own raising, and specimens of a very fine apple, probably the Hawthornden.

We have also received from David Cole, Shaker Village, Watervliet, fine specimens of the Spanish watermelon, and musk-melon.

Summer Bon Chretien Pear.—Mr. D. A. Buckley, Williamstown, Mass., has left us a sample of this pear. Mr. Downing describes this as being one of the oldest pears known, having been cultivated all over Europe for the last two centuries. It ripens the last of August or early in September. In regard to its quality, Mr. Downing says—"though a sweet and pleasant pear, it wants the flavor of our finer sorts, and does not deserve a place in a small garden."

Preserving Green Corn for Winter.—Mr. C. H. Tomlinson, of Schenectady, informs us that he saves green corn for table use in winter, by the following mode. When sweet corn is in the proper state for boiling, the ears are gathered, the outer husks stripped off, leaving only a single layer next the corn. The ears are then packed in a clean tight barrel, and covered with strong brine. It will keep a year. When wanted, the husk is taken off, the corn cut from the cob and soaked in fresh water for thirty-six hours, or till the salt is entirely extracted. By shifting the water, the freshening process is hastened. It is boiled in the same manner as ordinary sweet corn, and when cooked, about a table spoonful of sugar to two quarts of corn is mixed with it, and it is considered in no way inferior to corn just picked from the stalk.

Middlesex Co. (Ct.) Ag. Society.—We are indebted to Wm. Makinster, Esq., for the list of premiums to be awarded at the next Cattle Show of this Society, which is to be held at Middletown, on the 6th, 7th, 8th, and 9th of this month.

Securing Vegetables.—Potatoes should be dug and housed before the ground freezes. If they are in the least touched by frost, they are more liable to rot; and even if they are not actually frozen, they may become so chilled that their quality for keeping is injured. It is generally better to dig them soon after they get ripe. If the ground is dry, the potates will not suffer by remaining in it till the approach of frosty weather, but if the ground is wet, they will be better off in a cool, dry cellar. Another inducement for digging early, is, that after the potatoes get ripe and the vines die, the ground is very liable to be overrun by weeds, which greatly increases the labor of taking up the crop. Turneps, beets, cabbages, &c., may remain out till the first of November—in fact, if the weather is mild during the month of October, these articles generally continue to grow till through that month. Carrots and parsnips are sometimes left out all winter. Parsnips stand the frost without injury, but carrots, in this latitude, are generally more or less injured, and frequently spoiled. Indeed, it is better to dig the principal part of the parsnep crop in the fall. The tops or crowns should be cut off so closely that they will not sprout, and they should be covered with sand to keep them from the air. Managed in this way they keep well, and may be readily obtained for use all winter. Those left in the ground till spring will keep but a short time; and as soon as the tops start, the nature of the root is changed—from being sweet and nutritious, it becomes bitter and poisonous.

Great Yield of Wheat.—It is stated that Mr. Duncan Mc Vean, of Wheatland, Monroe county, N. Y., harvested the present year, 250 bushels of wheat from four acres of land. This would be 62½ bushels per acre. The grain is said to have been of Soule's variety.

Poetry.—Why may not your valuable Cultivator be occasionally enriched by poetry? Will it not add new interest and animation to its contents? Will it not be, comparatively, to your solid and useful matter, what the flowers and shrubbery of the farmer's house and garden, is to his useful barn and cornfields? Why recommend the tiller of the soil to plant trees and flowers, and decorate his grounds with the poetry of nature, and not enrich and enliven your columns occasionally with the poetry of the mind and heart? *I* am no poet, nor do I care to read a hundredth part of what is called poetry; but I have often wondered at its almost entire absence from your valuable paper. I have taken the liberty of calling your attention to the subject, knowing that, at the most, it could do no harm; and I also enclose some lines applicable to the purpose. Yours respectfully, H. B. Tuttle. *Cuyahoga Falls, Ohio, August* 18, 1847.

THE TILLER OF THE SOIL.

BY DAVID L. ROATH.

A hardy, sunburnt man is he,
  A hardy, sunburnt man;
No sturdier man you'll ever see,
  Though all the world you scan.
In summer's heat, in winter's cold,
  You'll find him at his toil—
Oh, far above the knights of old,
  Is the Tiller of the Soil.

No weighty bars secure his door,
  No ditch is dug around;
His walls no cannon bristle o'er,
  No dead lie on his ground.
A peaceful-laborer is he,
  Unknown in Earth's turmoil—
From many crushing sorrows free,
  Is the Tiller of the Soil!

His stacks are seen on every side,
  His barns are filled with grain;
Though others hail not fortune's tide,
  He labors not in vain.
The land gives up its rich increase,
  The sweet reward of toil;
And blest with happiness and peace,
  Is the Tiller of the Soil.

He trudges out at break of day,
  And takes his way along;
And as he turns the yielding clay,
  He sings a joyful song.
He is no dull unhappy wight,
  Bound in misfortune's coil;
The smile is bright, the heart is light,
  Of the Tiller of the Soil!

And when the orb of day has crown'd
  With gold the Western sky,
Before his dwelling he is found,
  With cheerful faces by—
With little laughing duplicates,
  Caresses will not spoil;
Oh, joy at every side awaits
  The Tiller of the Soil!

A hardy, sunburnt man is he,
  A hardy, sunburnt man;
But who can boast a hand so free,
  As he, the Tiller can?
Nor summer's heat, nor winter's cold,
  The power has him to foil—
Oh, far above the knights of old,
  Is the Tiller of the Soil!

LECTURES ON AGRICULTURE.

We have great pleasure in laying before our readers, the annexed notice of a course of lectures on Agriculture, by Mr. Norton, who, it will be remembered, was sometime since appointed Professor of Chemistry as connected with Agriculture, at Yale College. It will be seen that Mr. Norton enters upon his duties as Professor, by the delivery of a course of lectures, intended, not so much for the proficient in chemistry, as to give the *farmer* a clear and connected view of both science and practice in their relations to each other. From a recent interview with Prof. Norton, we were gratified to learn that it was his intention to give this course of lectures such a character as to attract and interest that large class of farmers who know little or nothing of chemtstry—to show them the proper connection of science with their pursuits, and to invite them to a course of study and reflection, calculated not only to improve their minds, but essentially to benefit them in the practical operations of their business. From his long and laborious investigations of the science of agriculture, under the ablest professors of chemistry, both at home and abroad—from his knowledge of the character and wants of our farmers, and the practical good sense which he brings to the task, we have the highest confidence that an institution is now founded, which will afford those who desire to partake of its benefits, a sound, practical, scientific agricultural education, such as is required to enable those who intend to become agriculturists, to follow their profession with both pleasure and profit.

The course now proposed, will continue two months, commencing on the first of January. The whole expense attending it, for board, tuition, &c., need not exceed $35 to $50, and we hope, and cannot but believe, that the class in attendance will be sufficiently numerous to afford Prof. Norton and the Trustees of Yale College, conclusive evidence that they have acted wisely in opening this avenue to knowledge to the farmers of our country.

In addition to the lectures, those who wish to pursue a short course of elementary Chemistry in the laboratory, will have an opportunity afforded to them, at a small additional charge. Two hours daily, will be devoted to the instruction of such pupils in simple experiments and tests, calculated to be useful in practical experience.

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Instruction in Chemistry and the Connected Sciences, at Yale College, New-Haven, Conn.—The new Laboratory of Analytical Chemistry, connected with this institution, will be opened on the 1st of November.

Pupils will, however, be received and temporarily accommodated, on the 1st of October.

The Department of Chemistry applied to the Arts, &c., will be under the charge of Prof. B. Silliman, Jr.

That of Chemistry applied to Agriculture, will be under the charge of Prof. John P. Norton.

Every facility will be afforded to pupils who wish to acquire a thorough knowledge of elementrry or applied Chemistry, Mineralogy, and Metallurgy, and the terms of tuition will be as moderate as the nature of the case will admit, and proportioned to the requirements of the pupil.

The annual course of Lectures on Elementary Chemistry, by Prof. B. Silliman, will commence on the 2d of October, at 12 M., and continue with five lectures each week, until about January 1st. Ticket, $15.

Prof. Norton will commence a course of lectures on the Application of Science to Agriculture, in January, 1848. This course will continue about two months, and there will be four lectures in each week. The object of these lectures will be to give the farmer a clear and connected view of both science and practice in their relations to each other. Experiments will be given when they are necessary to the clear understanding of the subject. The fee for this course will be $10.

Soils, rocks, minerals, metalic ores, and other substances, will be promptly analyzed on moderate terms. Pupils not otherwise connected with the college, participate in all the advantages of the above courses.

Arrangements will be made by which pupils in these departments can enjoy the advantage of attending to other courses of instruction in science, in this institution, which are open to the public; and they can also have easy access to large libraries and scientific collections. New Haven is a place of easy access from all parts of the Union, and is the resort of nearly six hundred students in the various departments. Board and lodging are procurable on very moderate terms.

Additional particulars will be promptly supplied on application by letter to either of the gentlemen whose names are given in this advertisement. *New Haven, Conn., Sept.*, 1847.

THE HORTICULTURIST for October, (No. 4, Vol II.) is embellished with a plate of "Montgomery Place," the beautiful and highly improved seat of Mrs. Edward Livingston, on the Hudson. Among its contents, are a description of this most delightful residence, illustrated by several engravings—the Cultivation and Propagation of Azaleas—Culture of the Peach—a Hint to Plant Growers—Memoranda on Pears—Fertilization of Plants—Remarks from Experience on the value of twenty-five Pears—Suggestions in regard to Pomological Reform—The Ida Green Gage Plum—Popular Errors about the rise and fall of Sap, with a great variety of shorter but valnable articles, under Foreign and Domestic Notices—Horticultural Exhibitions, &c., &c. This work, edited by A. J. DOWNING, Esq., is gaining an extensive circulation, and cannot fail to awaken a lively interest in the advancement of the rural arts throughout our country. It is published monthly, 48 pages octavo, at the office of "THE CULTIVATOR," and may be obtained of Messrs. NEWMAN & Co., booksellers, 199 Broadway, New-York—Messrs. J. BRECK & Co., Seed Store, 52 North Market-st., Boston, and of Messrs. ZIEBER & Co., booksellers, Chestnut-st., Philadelphia. Price $3 per year.

☞ The *American Farmer* copies without credit, our synopsis of the "Debates on the Profits of Farming," which took place at the Agricultural Meetings in Boston, last winter. The article as published in the *Cultivator*, was made up by us with considerable labor—it being the substance of the whole discussion, which occupied four or five evenings, and was very carefully *re-written* from the reports of all the meetings, published in no less than four different papers.

COMPOST.—The *American Farmer* recommends a compost prepared in the following manner. Take 40 bushels of mould from the woods, 5 bushels of ashes, leached or unleached, 5 bushels of bone dust, 1 bushel of plaster: the whole to be incorporated together by shovelling over, and the heap to be then thoroughly moistened by 30 gallons of human urine, and again shovelled over. The compost is recommended for one acre of wheat.

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks and ewes—of undoubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk. R. J. JONES.

Cornwall, Vt, June 1, 1847.—tf.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Sept. 21, 1847.

FLOUR—Genesee, new, $5.75a$5.87—Ohio and Michigan, $5.50a$5.75. Demand steady.

GRAIN.—Wheat, Genesee, per bu., $1.20—Corn, northern, 63a65c.—Rye, 74a75c.—Oats, 45a47 c. for good lots.

BUTTER—Orange County, per lb., 19a20c.—Western, dairy, 12a14 cents.

CHEESE—per lb., 7¼a7½c. for Herkimer county—6½a7 for Ohio.

BEEF—Mess, per bbl., $12.75a$13 In demand.

PORK—Mess, per bbl., $13.50—Prime, 10.50. Dull.

HAMS—per lb., smoked. 10½a11cts.

LARD—Per lb. 10a10½c.

HEMP—Russia clean, per ton, $275—American, dew-rotted, $110

HOPS—new, western, per lb., 10a12c.

COTTON—New Orleans and Alabama per lb., 12½a14½c.—Upland and Florida, 11a13½c.

WOOL—(Boston prices,) Sept. 18.

Prime or Saxon fleeces, washed per lb.	45a47½	cts.
American full blood fleeces,	40a42½	"
" three-fourths blood fleeces,	34a36	"
" half blood do	34a36	"
" one-fourth blood and common,	28a30	"

REMARKS.—By the Brittania, which left Liverpool on the 4th of August, and arrived at Boston on the 20th, we have English papers to the 3d of August. The prices of breadstuffs were still lower. The best western canal flour was quoted at 24s. 6d. and 25s. 6d. per bbl. Richmond and Alexandria at 23 s 6d. and 24s. Philadelphia and Baltimore 23s. 6d. and 24s. New Orleans and Ohio 20s. and 21s. Sour 20s. Indian corn 26s and 31s. per quarter. American pork was dull, and transactions in the article limited. Beef in demand, and a short supply in market.

The failures of English corn-factors have been quite numerous, and the results have been seriously felt by some of our grain and produce dealers. The crops, both in the British islands and on the continent, of Europe are good. In England and Scotland the harvest is unusually abundant, and in Ireland it is not lacking. The potato disease has appeared in a few locations, but the diminution in the usual supply, at the worst, is not expected to be less than one-fourth. The Mark Lane Express, speaking in regard to the disease, says, the potato may be fairly pronounced "convalescent," and will probably speedily recover its usual health. In various parts of Europe, the crops are described as heavy almost beyond precedent.

NOTICE.

ORDERS for the "Warren Horse Power and Thrasher," (latest style) Trimble's and others.—Also for Agricultural Machinery and Implements generally, will continue to be promptly attended to by the undersigned at 126 Pearl st. JAMES PLANT,
October 1, 1847.—1t. New-York City.

APRICOT TREES FOR SALE.

THE subscriber has for sale, at his nurseries at Fishkill Landing, N. Y., a few thousand of his Early Golden Apricot, which was noticed by Mr. Downing, in the Horticulturist for August.

This Apricot being a new variety, and a hardy and thrifty growing tree. the fruit ripening early, and the trees bearing young, in any exposure, and the fruit being comparatively free from the attacks of the Curculio, he can recommend it as a valuable kind to cultivate, either for market or domestic uses. The original tree, from which the present stock was worked, has been in bearing eighteen years, and has not failed to produce a fair crop every year. The fruit the present year sold for twenty dollars per bushel, by the quantity.

The trees are worked on peach and on plum stocks. Those on peach stocks, two years from the bud, are offered at twenty-five cents each, and those on plum stocks, one year from the bud, at 37½ cents each. A liberal discount by the hundred.

Also a large lot of Frost Plums, and a general assortment of Fruit Trees and Grape Vines. Priced Catalognes sent on post-paid application. CHARLES DU BOIS.

Fishkill Landing, Oct. 1, 1847.—1t.

FRUIT TREES OF SELECT VARIETIES ONLY.

For sale at the NURSERY of J. J. THOMAS, Macedon, Wayne county, N. Y.

THE aim of the proprietor has been to select only the very finest varieties, which their time of ripening, excellence, or productiveness, renders eminently desirable. This selection has been made personally, after many years of careful examination, from several hundred sorts in bearing.

No kinds are ever offered for sale which have not been fully tested by trial in a bearing state, so as to insure in all cases their genuineness or excellence.

The stock of Apples consists of many thousand trees, and are mostly of large size and fine growth; and besides the best standard varieties, includes the finest new sorts—as Northern Spy, Early Joe, &c.

The Cherries comprise the most celebrated varieties, and the trees are large, straight. and handsome. A good collection of Peaches, Apricots, and other kinds of fruit—all at moderate prices.

A large and select collection of Ornamental Trees, Flowering Shrubs, and Plants, including many of the most brilliant Roses, of new and rare kinds.

Catalogues and information by letter furnished on all *post-paid* applications; and trees securely packed in wet moss with mudded roots, so as to be sent with perfect safety by canal or railroad.

Oct.—2t.

SOUTH DOWN BUCKS.

THE subscriber offers for sale a few very superior South Down Bucks, some of which were selected by him in England. They are thought to be the best sheep of this breed in America, uniting as they do the blood of the celebrated flocks of the Duke of Richmond and Earls Jersey and Bathurst.

Application may be made by letter, addressed to Rhinebeck, N. York, or personally at the Ellerslie Farm, on the Hudson river, two miles south of Rhinebeck Landing. WILLIAM KELLY.

Ellerslie, Oct. 1, 1847.—1t.

10,000 Copies in Four Months.

COLE'S AMERICAN VETERINARIAN,

OR Diseases of Domestic Animals, showing the Causes, Symptoms, and Remedies, and rules for restoring and preserving health by good management, with full directions for Training and Breeding, by S. W. COLE, Esq.

This is emphatically a book for every farmer, and no farmer's library is complete without it. The demand for TEN THOUSAND COPIES in the short space of four months, speaks volumes in favor of the work. The farmer has in this neat and compact volume, a complete ENCYCLOPEDIA, in which he may find the whole subject of the Treatment of Domestic Animals, familiarly discussed, and rules and remedies fully and clearly prescribed.

Highly recommendatory notices have been received from many of the most distinguished Farmers and Editors in the country. The following short extracts show in what estimation the work is held.

[From Ex-Governor Hill of N. H.]

"Mr. Cole has shown himself well qualified for the compilation of this work. We understand that it has already had a free and extended sale; many times its price to almost any farmer, may be saved in its purchase."

[From J. M. Weeks, of Vermont.]

'The American Veterinarian is the best book of the kind I have ever seen. Every Farmer ought to have one."

[Christian Mirror, Portland.]

"We think no farmer would willingly be without this book after glancing at the Table of Contents."

[Albany Cultivator.]

"This will be found a useful book. It speaks of diseases under the names by which they are known in this country, and the remedies prescribed are generally within the reach of every farmer, and may frequently be found on his own farm. We second the suggestion that it should be in the hands of every farmer."

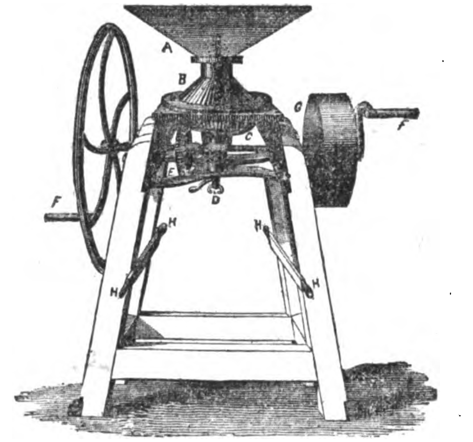
[American Agriculturist.]

"We recommend to all who keep Domestic Animals to procure Mr. Cole's new book. The lives of many valuable animals might be saved by following his directions."

The price of this valuable book, finely bound in leather, is 50 cents.

WANTED—50 active, intelligent, and enterprising agents, to sell this work, two in each State in the Union. A small capital of from $25 to $50, will be necessary for each Agent. Address, POST-PAID, the publishers. JOHN P. JEWETT & Co.

October 1—3t. 23 Cornhill, Booksellers' Row, Boston.



JOHN MAYHER & CO.'S NEW SELF-SHARPENING CORN, COFFEE, AND SPICE MILL.

THE above cut shows the construction of our Premium Mill for Grinding Corn, Oats, Coffee, Spices, &c., &c. It is considered highly valuable for its simplicity of construction, durability, and its adaptation for farmers, planters, and grocers. It may be operated by hand or horse power, and will grind from four to five bushels of good meal per hour, and from 300 to 400 lbs. of coffee or spice per hour. Price, from $28 to $30. We also have for sale a smaller mill for the same purpose, which will grind from 1½ to 2 bushels of corn per hour, and from 90 to 100 lbs of coffee per hour. Price, from $5 to $6.

JOHN MAYHER & CO.,
United States Agricultural Warehouse,
No. 195 Front, near Fulton-st., N. Y.

Oct. 3–1t.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: *A very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

OSWEGO NURSERIES AND FLORAL GARDEN.

J. W. P. ALLEN, Esq., having sold his interest in this establishment to E. A. Sheldon, the business will in future be conducted under the name of SHELDON & KLINE. Mr. Allen will hereafter devote his time as an amateur and market cultivator; and has kindly offered us his services in the introduction and testing of every new and rare variety, together with the use of his specimen grounds; and we flatter ourselves that we shall soon be able to show the finest collection of fruit in the Union; especially of PEARS and PEACHES, to which our soil and climate seem remarkably well adapted. The position of our nursery being the most northerly of any in the United States, and situated upon the immediate shore of the lake, fully exposed to the winds, which, at the same time, serve as a protection from the severity of frosts to our more tender fruits, renders our trees much hardier, and far more desirable for transplanting into every variety of soil and climate, than those grown in more southern sections, and on stimulated soils. Our trees are all vigorous and healthy, and free from the numerous diseases with which most other nurseries are infected.

The yellows of the peach, and the frozen-sap and fire-blight of the pear, are diseases never known in the Oswego nurseries.

We have now ready for sale some thirty thousand peach trees of the choicest varieties.

Our supply of Pears is also large and very desirable. We have, in addition to the usual stock, a few hundred of the *Oswego Beurre, only to be obtained at these nurseries*, which can be supplied, if desired, at $2 each, for those two years old from the butt or graft. Grafts will be supplied for $2 per dozen.

Our stock of Apples, Plums, Apricots, and Nectarines, though not as extensive, we trust is sufficient to supply the demand.

We have a good assortment of Ornamental Trees and Shrubs. Our Ailanthus, of which we have several thousand, are of the largest size.

Our collection of Roses, Bulbous Roots, Herbaceous, and Greenhouse Plants is very extensive.

All articles sold as cheap as can be obtained from any other nursery in the state. All orders promptly filled, and trees and plants packed and shipped in good order. Catalogues sent gratis to all desiring them. Address SHELDON & KLINE,

Oct. 1, 1847. East Oswego, N. Y.

WILSON, THORBURN & TELLER.

IN addition to their other nursery stock, will have for sale this fall, Beurre Langlier, Leon Le Clerc, Colmar D'Aremberg, Inconnue, Van Mons, and Althorp Crassane Pears.

W., T. & T. would also inform the public that they have made an arrangement with Dr. HERMAN WENDELL, by which they are to have the control of the stock of his magnificent new seedling cherry called "Wendell's Mottled Bigarreau," trees of which variety they will have for sale in the autumn of 1848.

Sept. 1, 1847.—1t.

GRANT'S PATENT FAN MILLS.

THE right to manufacture these celebrated mills can be obtained of the subscriber, at Junction P. O., Rensselaer Co., N. York. He also gives notice that he shall prosecute all persons who in any manner infringe upon his patent. I. T. GRANT.

Junction P. O., Rens. Co., N. Y., Sept. 1, 1847—4t.

AGRICULTURAL WAREHOUSE.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of AGRICULTURAL IMPLEMENTS, of the most approved patterns.

PLOWS, adapted to every variety of soil, embracing nearly 150 different patterns and sizes, among them the PREMIUM PLOW, for which he was awarded the silver cup, at the Fair of the American Institute, in Oct., 1846.

Moore's Premium Plow, which for general purposes has no superior.

Freeborn & Hitchcock's Plow, a good article, very extensively used at the south.

Minor, Horton & Co.'s Plows, various sizes.
Ruggles, Nourse & Mason's " " "
Prouty & Mears' " " "
Sub Soil " " "
Two and three furrow "
Side Hill and Double Mould "
Cultivators, with steel and cast shares.
Harrows, plain and double hinged.
Corn Shellers, Straw Cutters.
Mills for Grinding Grain, Corn and Cob Crushers.

Portable Horse Powers, of various kinds, for driving Threshing Machines, Mills, and other Machinery.

Threshing and Clover Machines of various kinds; Clover Cleaning machines

Fanning Mills,
Grain Cradles,
Wheel Barrows,
Store and Steamboat Trucks,
Cotton Trucks,
Sugar Mills,

Plow Castings, Castings for Horse Powers, Mill and Gin Gear, &c., &c. Carts and Wagons made to order.

Also on hand and manufactured to order, every description of Brass, Copper, and Iron Wire Cloth, Sieves, Screens, Riddles, &c all of which will be sold on the most favorable terms.

JOHN MOORE, 193 (old No. 183) Front-st., N. York.

Sept. 1, 1847.—1t.

A VALUABLE FARM IS FOR SALE

IN Windsor, Vt., containing upwards of 400 acres of land, comprising tillage, grazing, and woodland in due proportion. It is situated on the banks of the Connecticut river, near the village of Windsor, and also near the eastern terminus of the Vermont Central railroad, and is well provided with suitable buildings, among which is a beautiful English cottage, recently built. The farm is in a fine state of cultivation, and in point of capacity for improvement, and convenience, and beauty of situation, is unsurpassed in its own beautiful valley. **SAM'L H. PRICE, Agent.**

Windsor, Vt., Aug. 1, 1847.—3t.

PROUTY & MEARS' PLOWS.

THESE celebrated plows are warranted, and the money will be returned for every plow that does not suit. Hon. Dixon H. Lewis, Senator from Alabama, said, at the Farmer's Club in New-York, "My corn crop declined from 70 bushels per acre to 40; I sent north and got one of Prouty's plows, and now have the best crop within 50 miles."

The subscriber is sole agent, and offers for sale an assortment of the above plows, as also a general stock of agricultural Implements. **SAMUEL C. HILLS, 189 Water-street, N. Y.**

New-York, August 1, 1847—3t.

ONE OF THE GREATEST INVENTIONS OF THE AGE.

KEPHART'S PATENT FRUIT AND VEGETABLE PRESERVER—by the use of which Fruits, Vegetables, Butter, Eggs, Bacon, &c., can be had at all seasons of the year—possessing all their natural juices and flavor.

The undersigned, having purchased the above patent right for the United States and Territories, excepting the states of New-Jersey, Delaware, Maryland, and the cities of New-York and St. Louis, invite the attention of the public to an examniation of the scientific principles upon which the above invention is based, as well as its practical utility. For a particular description of the Preserver, see the Cultivator for July, 1847, page 217. They offer for sale patent rights for the construction and use of the Preserver, by states, cities, counties, towns, or individual rights, upon terms that will induce all interested in the growth or sale of fruit and vegetables; also dealers in butter, eggs, or in the curing and preservation of meats, to purchase rights and construct houses.

All desirous of a farther knowledge of the operations of the preserver, can see one in operation, either by calling upon P. Kephart, Western Hotel, Baltimore, Md., who is our authorized agent, or upon the subscribers, Coats-st. Wharf, near Fairmount, Phila.

All communications will receive prompt attention if addressed either to P. Kephart, Baltimore Md., or **FLACK, THOMPSON & BROTHER**, Spring Garden P. O., Philadelphia, Pa.

July 1—tf.

PURE BRED RAMS.

THE subscriber has a few choice rams for sale, bred from the celebrated flock of Geo. Flower Esq., of Albion, Illinois, and some from a Saxon ram imported by Henry Clay, Esq., of Ashland, Kentucky. These sheep are of fine healthy constitution, with a very fine long staple.

He has also added to his flock 20 ewes and rams, selected from the flock of Samuel Patterson, Esq., of Washington Co, Pa. These sheep are not surpassed by any in America; [see the communication of L. A. Morrell, Esq., Cultivator for Nov. 1846,] their wool having been sold last year in Northampton, Mass., at 75 cts.

He has also a few fine young Shepherds' Dogs, bred from a Scotch cully, imported by Mr. Mitchell, of Lasalle Co., Ill.

A. H. NICHOLS, Greencastle, Putnam Co., Ia.

August, 1, 1847—4t.

GENEVA AGR'L FOUNDRY AND SHOPS.

THE subscriber has recently put in operation a new FOUNDRY AND MACHINE SHOP, intended chiefly for the manufacture of AGRICULTURAL IMPLEMENTS. A number of valuable improvements in various farming tools having been made and patented by his predecessor, (T. D. Burrall,) this establishment has been erected for the manufacture of *these* and such other implements as the market may require, and in order that purchasers may depend upon a genuine and well finished article. Among other things he has now on hand

Burrall's Patent Threshing and Clover Machines and Horse Powers
" " Shell Wheel Plows, greatly improved the present season.
Burrall's Patent Corn Shellers, Nos. 1 and 2, do. do.

Also, Subsoil, Corn, and Shovel Plows, Straw Cutters, of various kinds, Scrapers, Plow Points, Trimmings, &c., &c.

He intends adding to his present stock from time to time, by selections from the best articles in market; all which will be got up in the best style, and sold, wholesale and retail, on reasonable terms.

Mill Gearing, Castings of all kinds, pattern-making, &c., &c., executed on short notice. **E. J. BURRALL.**

Geneva, August 1, 1847.—4t.

MULTICOLE RYE.

THIS kind of rye was introduced from France a few years since, but has been tried in this country sufficiently to prove its adaptedness to our soil and climate. Its yield, in most cases, is from a sixth to a fourth more than that of common rye, under the same circumstances. A few bushels for sale at the Ag. Warehouse and Seed Store, 10 and 12 Green-st., Albany.

Sept. 1. **LUTHER TUCKER.**

BUFFALO NURSERY AND HORTICULTURAL GARDEN, BUFFALO, N. Y.

THE stock of fine, thrifty Apple trees, now of size for sale, is unusually large and fine. The assortment of Cherry trees is also very extensive, comprising the most choice and popular sorts. Peach trees, a very fine collection, healthy and free from disease. Pear trees of the most choice and select varieties, both on free stocks and also worked on quince stocks, for dwarfs or garden culture. But seven trees in these nurseries have ever been affected by fire blight. Also, a very general assortment of the Plum, Quince, Apricot, Nectarine, Gooseberry, Currant, Raspberry, Strawberry, &c.

The assortment of Ornamental Trees and Shrubs, Flowering plants, embraces almost every desirable article in this department.

Roses, 240 varieties. Many very choice and rare varieties of Moss, Hybrid Perpetual, Bourbon, and other roses, have recently been added to the collection.

A fine collection of Green-house Plants; among them 80 choice varieties of the Camelia Japonica.

Very extensive additions are constantly being made to this establishment, and no expense has been spared to render it as perfect as that of any other in our country. Trees destined for the west will be shipped at Buffalo, per steamboat or propeller, unless otherwise ordered; and the advantages that these nurseries possess over eastern nurseries in supplying the great west will be seen at a glance. To say nothing of the extra expense of transportation, the saving of eight or ten days, [very often two or three weeks,] in their transportation, is an item of some little importance.

The new Descriptive Catalogue of this establishment, a pamphlet of 60 pages, giving a full description of several hundred varieties of fruits, &c., will be sent gratis to all post-paid applicants. Orders by mail, or otherwise, will receive the most prompt attention.

Buffalo, Sept 1, 1847.—2t. **BENJ. HODGE.**

AMERICAN EGG HATCHING MACHINE.

Patented Feb. 20, 1846.

AFTER 15 months of practical demonstration, the subscriber is enabled to present the above machine to the public with confidence, as an auxiliary to the wants of the farm-house. It is so simple in its construction and management, that a child can in a short time superintend its operations, with about an hour's attention during the day; and it requires no care after bed-time. Alcohol, or other high wines, is found to be the *cheapest* and cleanest fuel, and by repeated trials, the average expense of this kind of fuel does not exceed a quarter of a cent an egg, for the full term of twenty-one days. The chickens produced are healthy and strong, and their fine appearance has been the subject of general remark, among the many visitors (now) attending Saratoga. Full printed directions and explanations accompany each machine. The machines are durable, and can be sent with safety through any of the ordinary channels of conveyance.

PRICES.

No, 1,	containing	between	250 and 300	eggs,..	$20 00
" 2,	"	"	500 and 600	" ..	30 00
" 3,	"	"	800 and 1000	" ..	40 00

☞ Rights for towns, counties, or states, will be disposed of on very reasonable terms.

Reference, Editors of Cultivator. **L. G. HOFFMAN.**

Albany, Sept. 1, 1847—2t.

I. T. GRANT & CO'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hope to be enabled hereafter to supply promptly the rapidly increasing demand for that article. Their Fan-mills have taken the *first premium* at four of the New-York State Agricultural Fairs, at the State Fairs in Pennsylvania and Maryland, at the Fair of the American Institute, and at a large number of County Fairs, and secured the highest consideration at the great National Fair, at the city of Washington. They have been repeatedly tried, and the principle upon which they operate thoroughly tested by committees appointed for that purpose, and in every instance have been declared *superior* to any that have come in competition with them. They have never been awarded the *second premium*, and are the only mills manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle and *smut* at the same time. They will also thoroughly clean *rice*, and all kinds of grain and seeds by running it through once.

The materials, workmanship, and finish of these mills are superior to any in market. The bearings are all turned and finished so that a boy can turn them with perfect ease. We manufacture four sizes, (with seven sieves to each mill,) varying in price from $21 for No. 1, to $27 for No. 4, and warrant them superior to any now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premiums wherever exhibited.

Our Fan Mills and Cradles are for sale at the following places:
John Mayher & Co., 195 Front-st., New-York.
E. Whitman, 55 Light-st., Baltimore.
Denslow & Webster, Savannah, Georgia.
Fitzhugh Coyle, Washington City.
J. W. Howes, Montpelier Vt.
Luther Tucker, 10 & 12 Green-st., Albany, N.Y.
H. Warren, Troy.

I. T. GRANT & Co.

Junction P. O., Rens. Co., N. Y., Sept 1, 1847.—4t.

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PURE SOUTH DOWN SHEEP.

WILL be for sale at the Fair of the American Institute, in October next, two Bucks and two Ewes, very handsome; descended from the flock of the late John Ellman, Esq., of Glynde, Lewes, Sussex, England. OB'H. ELLIOT.

Middleham, Elizabethtown, New-Jersey, Oct. 1, 1847.—1t*

SHEEP AT AUCTION.

PERKINS & BROWN have between two and three hundred Bucks, and probably about as many ewes, more than they wish to winter, which they will sell at auction on Tuesday, the 19th of October next. Terms cash.

Their sheep have all been selected and bred with particular regard to constitution, length, thickness, and fineness of fleece, and would greatly improve the character of most of the flocks in the country.

Akron, Summit Co., Ohio, Aug. 21st, 1847.—1t.

FINE WOOLED BUCKS.

THE subscriber has for sale thirty superior Bucks, one and two years of age, of good size and form, raised from fine heavy fleeced ewes of the Saxon and Merino varieties. These Bucks were got by Green Mountain Hero, whose last fleece weighed 10 lbs. 8 oz., thoroughly washed under a waterfall. The quality of his wool, as tested by sorting at the factory, was as follows:

Extra,	4 lbs.	3 oz.	3d quality	1 lb.	6 oz.
1st quality	1 "	13 "	4th "	0 "	10 "
2d "	1 "	4 "	5th "	1	2 "

These Bucks are numbered, and the subscriber has a record of the weight of their fleeces, also samples of wool from most of their fleeces. EBENEZER SMITH.

Middlefield, Hampshire co., Mass., Sept. 7, 1847—2t.*

AFRICAN AND CHINESE GEESE.

FOR sale, a pair of African Geese—(goslings of last spring,) of very large size. This variety has been called "the Swan Goose," and the "Pouched Goose." They are of the largest class.

Also a pair of Chinese Geese, bred by Messers. MESSIER, near Fishkill. They are perhaps the handsomest in form and plumage, of all geese, are not large, but very prolific, breeding twice or more in a season, and are said to be excellent in flesh. Both varieties are decidedly ornamental to poultry-yards, and should belong to all fine places where there are suitable accommodations for them. Inquire at this office. Oct. 1, 1847.

TREES.

COMMERCIAL GARDEN AND NURSERY OF PARSONS & CO.,

Flushing, near New-York.

THIS establishment now covers an area of more than seventy acres, and the proprietors are enabled to furnish on the most reasonable terms, every desirable variety of Fruit and Ornamental Trees, Shrubs, Roses, Vines, &c.

During the past year, their collection has been enriched by many novelties from Europe, which will be found worthy the attention of amateurs. Catalogues furnished gratis on application, by mail, to Flushing, or personally at 10 Pine-St., New-York.

Oct. 1, 1847.—1t.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & Co., (successors to A. J. Downing & Co.,) beg leave to inform the patrons of this establishment and the public in general, that their stock of FRUIT TREES for sale for autumn planting, is full and complete, comprising all that is choice and rare of recent introduction, as well as a full and large assortment of all the leading standard varieties.

Their stock of ORNAMENTAL TREES being unusually large, &c., they would particularly call public attention to their stock of the following species, as being extra fine:

EVERGREENS.

Astrian Pines,
Scotch do.,
Weymouth do.,
Balsam Fir.
European Silver Fir,
Norway Spruce,
Junipers—varieties,
Arbor Vitæ, do.
Yews, &c., &c.

DECIDUOUS ORNAMENTAL TREES.

Horse Chestnut, Red,
—— White,
—— Yellow,
Maple, Sugar,
—— Silver leaved,
—— Scarlet,
—— Norway,
—— English cork-barked,
Aianthus,
Catalpa,
Weeping Ash,
European do.,
American do.,
Kentucky Coffee,
Tulip Tree,
European Larch,
Cucumber Magnolia
Umbrella do.
Oriental Sycamore,
European Mountain Ash,
Willow-leaved Oak,
Weeping Willows,
European Linden,
Southern Cypress,
American Elm,
Scotch Wytch do.
English do.
" Cork-barked do.

American Arbor Vitæ, for screens.

Also Hawthorn, Buckthorn, and Privet Plants, together with a splendid stock of Osage Orange Plants for hedges.

A choice collection of Green-house Plants for sale in one lot or in parcels; for particulars see Horticulturist for September.

Catalogues sent gratis to post-paid applicants.

Highland Nurseries, Newburgh, Oct. 1, 1847.—2t.

FOR SALE.

THE full-blooded Durham Bull "Napoleon," bred by Charles Henry Hall, owned by the subscriber at Leeds, four miles from Catskill. His stock is very superior, and can be seen if desired. He will be sold cheap, as the owner, having used him several years, wishes to change his bull.

JAMES VAN DUZEN.

Leeds, Greene Co., N. Y., Oct. 1—1t*

CHOICE FRUIT AND ORNAMENTAL TREES FOR SALE.

15,000 PEACH TREES, of about 30 different varieties. These will be sold in small quantity at 12½ cents each, and in large quantities at from $6 to $8 per hundred.

30,000 Native Wild PLUM SEEDLINGS, one year old, from two to three feet high, at $8 per thousand.

100,000 APPLE SEEDLINGS, 1 year old; average height 12 inches; at $3 per thousand.

Also on hand a very good assortment of Apple, Pear, Plum, Cherry, Apricot, and Nectarine Trees.

ORNAMENTAL TREES, of extra size, suitable for streets or lawns, consisting of Elms, Maples, European Linden, European Mountain Ash, European Larch, Norway Spruce, Firs, &c., &c. Also English Syccamore, and Sugar Maple Seedlings, from two to three feet high. Price, $12 per thousand. Packing extra.

Trees will be carefully packed and delivered at the steamboat landing, or Kinderhook Depot, free of expense.

Catalogues furnished to all who wish, and post-paid letters and orders containing remittances, promptly attended to.

HENRY SNYDER.

Kinderhook, Oct. 1—1t*

THE CULTIVATOR

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. IV. ALBANY, NOVEMBER, 1847. No. 11.

MAKING AND SAVING MANURE.

MESSRS. EDITORS—In looking over the back volumes of the *Cultivator*, my attention was caught by the remarks of two distinguished individuals, appended below, and upon which you then made some valuable observations. As the subject is one of vital importance to the farmer, and one upon which there should be "line upon line," I shall make a few observations, the result of my own individual experience.

AUTHUR YOUNG said, many years ago. "he who is within scent of a dung-hill, smells that which his crop would have eaten if he would have permitted it."

Sir HUMPHRY DAVY demonstrated this.—He says, "I placed a quantity of fermenting manure in a retort, and ascertained that it gave off a liquid containing a large proportion of salts of ammonia. Seeing this result, I introduced the beak of another retort, filled with similar manure, under the roots of some grass in the garden, and in less than a fortnight a very distinct effect was produced on the grass upon the spot exposed to the influence of the matter disengaged in fermentation; it grew with much more luxuriance than the grass in any other part of the garden."

There are many substances on every farm, which, while in themselves enriching, may be profitably mixed with the manure to absorb and retain these volatile portions which arise from the process of fermentation.

The first material I shall name, is swamp muck It may be truly said, that the farmer who owns a muck hole of good quality, and knows how to use it, is possessed of a mine of wealth which will surely render his farm productive and profitable. I speak advisedly upon this subject, having used the article for several years in every variety of form. I say, without fear of argument or contradiction, that a compost, properly made, of two loads of muck to one of good, fresh manure, is equal, in its effects on gravelly or sandy soils, load for load, to green manure.

In order to manage muck to the best advantage, the farmer should so contrive matters as to get a year ahead with his manure, so as not to be obliged to use it until his compost is fully ripened. In my opinion, formed from repeated trials, the noxious acids must be fully expelled from the muck by age and fermentation, to reap full benefit from its application to the soil.

August and September are generally the most favorable months for digging muck. First, then, the swamps should be *thoroughly drained*—there should be no half way work here, for the benefit to be derived from it will fully warrant the undertaking, even if considerable expense is necessary. When drained, commence carting the muck to a suitable and dry spot on the field where it is to be used. Lay the cart loads of it in two rows, as long as the heap is to be when finished, with a space say of six or eight feet between. First spread down of the muck on each side, into the space between, a layer, ten or twelve inches thick, and then haul on the manure from the windows, driving *up to the ends* of this bed, and throwing in from the cart on to it a layer, say eight inches thick, of manure—the workmen should not drive on to the bed and tip up the cart, to save labor, for reasons presently to be given—another layer of muck, shovelled on from each side, and then manure, using two loads of muck to one of manure, and so on until the heap reaches about five feet in height, the last covering being of muck. Care should be taken to lay the compost up as lightly as possible, in order to secure perfect fermentation. The team should not be driven up on to it, as we have seen farmers do, nor should even the workmen tread on it.—For the same reason the heap should not be built too high, as the pressure upon the bottom courses will be so great as to prevent their rotting down thoroughly.

The compost gets into a general heat sooner or later, after it is made up, according to the weather or season of the year. It is proper here to remark that the summer months are most favorable for making up the heaps, although they may be made up as late as November. In this case, however, a greater proportion of manure must be used, and the heaps will need to be shovelled over the next April to fit them for spring crops. I have also composted muck both with lime and ashes, when the quantity of dressing for my land was not sufficient from my muck and manure compost. Last season I made a compost of sixty one-half cords of muck, and six casks of lime, seven bushels to the cask, and applied it to a field of ten acres of corn, using the manure compost as far as it would go, and then the lime and muck. The corn compared favorably, on the part of the field dressed with the lime and muck, to that where manure and muck was used; the whole field averaging a little better than sixty bushels per acre. I have also found that five or six bushels of ashes to a half cord of muck, makes a compost equal to either of the others. A load of leached ashes to six loads of muck, is also a good compost for sandy land.

In applying these composts to the soil, I have found. after trying it by spreading on to the grass ground, before breaking up and turning it under the whole depth of the furrow, and also by spreading on top of the furrow, and harrowing it in, that neither way was best. It is difficult to bury thirty or forty loads per acre sufficiently with the harrow, and turning it down to the bottom is too deep. I therefore do my breaking up late in the fall—say in November. The frosts of winter completely pulverise the surface, and kill the grass roots, so that in the spring I have a clean bed to work upon. The compost is then spread, thirty to forty loads per acre, and harrowed first, and then covered three to four inches with the plow. This I can easily do, as I always break up my grass land from six to nine inches deep, varying with the quality of the land. By this mode of practice, my corn crops always average as high as sixty bushels per acre, and on my best land sometimes as high as eighty bushels.

Having now given my experience with composts, I have something to say of the barn-yard. And by the way, Messrs. Editors, how many yards you will see upon a side hill, with perhaps a brook running by or near the lower side, where all the cream of the yard runs to, benefitting nobody knows who. Instead of this kind of management, the yard should be made considerably dishing towards the centre and the sides will then be dry to walk around. A good supply of muck should be hauled to the yard in August or September, where, if the yard *is shaped right*, it will absorb all the liquids and wash of the higher parts, and retain them until wanted. The yard should be cleaned out after haying the next season, and the contents laid up in square compact heaps on the field where wanted. The loads should not be tipped up, to save work, sprauling five or six loads over a quarter of an acre, exposing a needless surface to evaporation, but nicely laid up; the straw and stalk litter and the liquids of the yard among the muck, will ferment it strongly, and the next spring it will be a black, free mass, and spread like garden mould.

In addition to supplying the yard liberally with muck, a quantity of leaves may be gathered, late in the fall, and used for bedding the cattle. Some farmers, instead of this, lay the planks of the cattle stalls with an opening between them of about one-half inch, and so arranged as to be easily taken up. Two feet thick of muck or loam, is put under the floor, and in the spring it is excellent manure.

The hog-pen is also an important help in making manure. Four or five hogs will make from April to December at least thirty loads of most excellent compost, if properly attended to. In fact it is a business which they seem fully to understand and appreciate. The hog yard should not be extended over too much ground, as there will be a loss by evaporation attending it. The yard should be in as small a compass as practicable, and two or three loads of materials put in at a time. As often as once a fortnight, holes should be made in the manure with an iron bar, and corn dropped into them. By attending to this operation, the hogs will work the compost over from top to bottom.

Every farm has not muck upon it, but every farm has something in the shape of enriching materials which may be profitably carted to the yards. Rich turf, thickly matted with grass roots, and dug about two inches deep, is an excellent material with which to cover a yard. The accumulation of leaves and vegetable mould in the hollows and at the foot of hills in woodlands—the accumulations by the sides of stone walls and fences in the lots, are also good. Every observing and enterprising farmer will find something on his farm, with which he may profitably increase his stock of manure.

I think that observation will fully justify me in the remark, that the farmers of New England might generally double the quantity of their manure heaps, without detriment to the quality, by attending to the collecting of those substances to be found on every farm, which, while enriching in themselves, absorb and retain much of the liquids and gases of the manure, which would otherwise run to waste.

F. Holbrook.

Brattleboro, Aug. 17, 1847.

ON COOKING FOOD FOR CATTLE.

We are frequently asked whether the cooking of food for stock, by steam or otherwise, would be profitable. So far as regards feeding cattle, we are without any reliable experiments which have been made in this country to test this point. The subject has attracted much attention in England and Scotland, and the results of several experiments there made, have been recorded. These experiments seem mostly to lead to the conclusion, that though in some instances cooked food does produce a greater gain than the same amount of raw food, yet the advantage of the former is not sufficient to defray the expense. In feeding hogs, however, especially where grain of any kind is used, the advantage of cooking seems to be generally admitted. We are also inclined to think, that there may be an advantage in partially cooking some kinds of food for cattle—such as corn stalks, chaff, or straw, which by this means become more palatable, and the nutriment they contain rendered more soluble, and more easily assimilated. The whole subject of feeding animals, however, is one deserving of more thorough investigation than it has here received, and we would earnestly commend it to the attention of our agricultural societies. In the meantime, we submit the following extract from an article "on the Management of Live Stock in Scotland," published in the London *Farmer's Magazine:*

An important question regarding the feeding of cattle, and one in reference to which considerable diversity of opinion still prevails, is whether cooked or uncooked food is the most profitable. The determination of this question has been made the subject of careful experiments by eminent farmers north of the Tweed, and I shall now give an epitome of the results obtained, and the conclusions arrived at.

Mr. Boswell, of Kincausie, in Kincardineshire, experimented on ten Aberdeenshire horned cattle, very like one another, and their food consisted of the Aberdeen yellow bullock turneps and potatoes. The five put on raw food weighed alive 228 stones 11 lbs.. and the other five on cooked food 224 stones 6 lbs. When slaughtered, the butcher considered both beef and tallow to be perfectly alike. Those fed on raw food cost £32 2s. 1d., and those on cooked, £34 5s. 10d., leaving a balance of expense of £2 3s. 9d. in favor of the former. Mr. Boswell mentions that the lot on raw food consumed more than those on steamed, and that when *raw* turneps and potatoes were put into the stall at the same time, the potatoes were always eaten up before a turnep was tasted; while, on the other hand, *steamed* turneps were eaten in preference to steamed potatoes. The conclusion arrived at by Mr. Boswell is, that it is unprofitable to feed cattle on cooked food. "It appears," he says, "that it is not worth the trouble and expense of preparation to feed cattle on boiled or steamed food; as although there is a saving in food, it is counterbalanced by the cost of fuel and labor, and could only be gone into profitably where food is very high in price, and coal very low."*

The above results, regarding the unprofitableness of cooked food, have been corroborated by the experiments of Mr. **Walker**, of Ferrygate, in East Lothian. He selected in February six heifers that had been on turneps, and were advancing in condition, and divided them into two lots of three heifers each, and put one lot on raw food, and the other on steamed. The food consisted of as many swedes as they could eat, with 3 lbs. of bruised beans, and 20 lbs. of potatoes, half a stone of straw, and 2 oz. of salt, to each beast. The three ingredients were cooked by steaming, and the bruised beans were given to the lot on raw food at noon, and one-half of the potatoes in the morning, and the other half in the afternoon. It was soon discovered that the lot on the cooked food consumed more turneps than the other, the consumption being exactly 37 cwt. 16 lbs.; whilst, when eaten raw, it was only 25 cwt. 1 qr. 14 lbs.—the difference continued during the progress of the experiment for three months.

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* Prize Essays of the Highland and Agricultural Society

Stots [steers] were experimented on as well as heifers. there being two lots of two each. They also got as many Swedish turnips as they could eat; but had 30 lbs. of potatoes and 4½ lbs. of bruised beans, 2 oz. of salt, and half a stone of straw each, every day.

The cost of feeding each lot was as follows:

Three heifers on steamed food, for one week, £1 2s. 1½d., or 7s. 4½d. each.

Three heifers, on raw food, for one week, 16s. 3d., or 5s. 5d. each.

Two stots, on steamed food, for one week, 16s. ½d., or 8s. 6¼d. each.

Two stots, on raw food, for 1 week, 13s. 6½d., or 6s. 9¼d. each.

The following is a statement of the comparative profits on cooked and raw food:

	£.	s.	d.
Live weight of heifers when put to feed on steamed food, 74 st., equal to 42 st. 4lbs. beef, at 5s. 6d. per st., sinking offal...	11	12	7
Cost of keep for 12 weeks 5 days, at 7s. 4½d. per week	4	19	0
Total cost.......	16	11	7
Live weight of the same heifers when finished feeding on steamed food, 90 st., equal to 50 st., 9 lbs., at 6s. 6d. per st., sinking offal	16	9	1½
Loss on steamed food on each heifer....	0	2	6½
Live weight of one heifer when up to feed on raw food, 74 st., equal to 42 st. 4 lbs. beef, at 5s. 6d. per st., sinking offal...	11	12	7
Cost of keep, 12 weeks 5 days, at 5s. 5d. per week	3	8	10½
Total cost.......	15	1	5½
Live weight of the same heifer when finished feeding on raw food, 89 st. 3 lbs., equal to 50 st. 1 lb. of beef, at 6s. 6d. per st., sinking offal..................	16	5	5½
Profit on raw food on each heifer......	1	4	0
Live weight of one stot when put up to feed on steamed food, 84 st., equal to 50 st. 4 lbs., at 5s. 6d. per st., sinking offal.............................	13	4	0
Cost of keep for 12 weeks 5 days, at 8s. 6¼d. per week.........................	5	8	4
Total cost.......	18	12	4
Live weight of tne same stot after being fed on steamed food, 104 st. 7 lbs., equal to 56 st. 10 lbs., at 6s. 6d. per st., sinking offal.........................	18	8	7½
Profit on each stot on steamed food.....	0	3	8½
Live weight of one stot when put on raw food, 90 st., equal to 51 st. 6 lbs., at 5s. 6d. per st., sinking offal..............	14	2	10½
Cost of keep for 12 weeks 5 days, at 6s. 9¼d. per week......................	4	6	1
Total cost.......	18	8	11½
Live weight of the same stot after being fed on raw food, 106 st. 7 lbs., equal to 58 st. 6 lbs., at 6s. 6d. per st., sinking offal	18	19	9½
Profit on each stot on raw food........	0	10	10

The following table shows the progress in condition made by the cattle experimented on:

Cattle.	Average live weight of three at commencement of feeding.	Average live weight of three at end of feeding.		Average increase of live weight in three months.		Average dead weight of beef.		Average weight of tallow.		Average weight of hide.		Average weight of offal.	
	st.	st.	lbs.	st.	lbs.	st.	lbs.	st.	lbs.	st.	lbs.	st.	lbs.
Heifers on steamed food.	74	90	0	16	0	50	0	7	11	3	12	26	9
Heifers on raw food....	74	89	3	15	0	50	1	8	4	4	4	26	10
Stots on steamed food...	84	103	4	19	0	56	19	8	11	5	12	28	3
Stots on raw food......	90	106	5	15	0	58	6	8	8	5	4	30	4

The conclusion which Mr. **Walker** draws from his experiments is the following:

"We have no hesitation in saying that, in every respect, the advantage is in favor of feeding with *raw food*. But it is worthy of remark, that the difference in the consumption of food arises on turneps alone: we would therefore recommend every person wishing to feed cattle on steamed food, to use potatoes or any other food that would not lose bulk and weight in the steaming process; as there is no question but in doing so they would be brought much nearer to each other in the article of expense of keep. Upon the whole, we freely give it as our opinion, that steaming food for cattle will never be attended with beneficial results under any circumstances whatever, because it requires a more watchful and vigilant superintendence during the whole process than can ever be delegated to the common run of servants, to bring the cattle on steamed food even upon a footing of equality, far less a superiority, to those fed on raw food."†

Mr. **Howden**, of Lawhead, in East Lothian, obtained similar results from his experiments, which were conducted with a view of ascertaining whether cooked or uncooked food is the more profitable in the feeding of cattle. He found the preparation of the food by steaming any thing but profitable. The cost of preparing the food in his case was, however, considerable, as an expense of about ten shillings each animal was incurred by the practice. A single horse load of coals, carriage included, cost ten shillings; and exactly six cart loads were required and used in preparing the food for the cattle, equal to 6s. 8d. each, and probably as much more would not be an over estimate for the additional labor in three months. According to Mr. HOWDEN's experience, it seems that steaming renders tainted turnips somewhat palatable, while it has a contrary effect on tainted potatoes; the cattle preferring these raw. Turneps require a longer time to steam, and lose 1-8th or 1-10th more of their weight than potatoes.

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† Prize Essays of the Highland and Agricultural Society.

A VISIT TO THE REAL SCHÜLE [PRACTICAL SCHOOL] IN GIESSEN.

(From the Journal of a Chemical Student—Spring of 1845.—Communicated to "The Cultivator.")

A FEW days since the annual examination of the pupils took place in the presence of the government commissioners, a few patrons, and gentlemen from out of town. It was conducted in the school building, which is a plain wood and brick structure, at the bottom of a shallow court, looking out upon one of the most quiet and unfrequented streets in the city. So far as retirement and stillness are concerned, no situation in the whole town could be better. In other respects the new building about to be erected, will doubtless have more attractions—for about this are no trees, no pleasant grounds, no objects of art, and within, very little consideration of comfort is displayed in the structure and disposition of seats, desks, &c.

By invitation of one of the teachers, I was present. I entered a room on the second floor at 9 o'clock, just as the whole school rose to sing. They were led, or accompanied rather, by their teacher on the violin, and sustained three parts of a pleasant morning song, with much sweetness and great volume of voice. Upon counting those who did *not* sing, and making such an estimate as I might of the whole number, the proportion of the former to those who sung I found to be about as one to six or seven. Their ages varied from seven to sixteen years.

The seats were long benches, each of which, with the desk in front, was framed into a kind of moveable platform, so that the removal of a suite of desks would be attended with the transport of the corresponding seats. Arranged parallel to each other, each row of desks is the back of the seats in front. The floor is raised at the farther extreme, so that the desks and seats are upon an inclined plane, bringing all the pupils in full view of the director, as he is seated upon an elevated platform in one corner.

In the corner adjacent to that occupied by the director, is a large case containing models of mathematical forms. Around the walls, were great numbers of pencillings, india-ink drawings, crayon portraits, paintings in water colors; and, in full view of the class who usually occupy these seats, a series of plaster models of the ear, hand, foot, head, and a variety of designs in basso and alto relievo. From these I fancied some of the drawings had been made. Upon examining the drawings closely, I found them all bearing the stamp of instruction by a teacher who knew how to accomplish a given effect of light and shade with the fewest strokes of the pencil.

At the right of the director's desk, and in full front of the class, was the black-board, suspended by two rings from the wall, immediately behind. About the black-board, standing or sitting, were the teachers whose classes might be called up for examination during the day. First of all was the director, whose position is a little more than equivalent to that of a principal of a high school with us—then comes the teacher of Chemistry and Natural Philosophy—then of History—then of Moral Philosophy—then of Geometry, Trigonometry and Geometrical Projection—of Algebra, of French and English—of Music, of Geography—of Drawing—of Book-keeping, and of Penmanship.

At the close of the exercise in singing—with which the day of study and recitation is regularly introduced—the pupils of the lower classes withdrew, leaving about sixty, and the examination in Moral Philosophy commenced. The instructor was a man gifted in exciting the interest of others in what he taught. All the pupils continuing in their seats, except when particularly singled out to reply to an inquiry, he commenced a kind of parenthetic lecture on the first principles of morality—coming always to a full pause where the expression embodying the thought was to be uttered. These pauses of the teacher were filled up by the pupils; and the examination, with little intervals of catechetical exercises, consisted in this dissertation, in which the teacher controlled the conjunctions and prepositions, while the pupils distributed the substantives, adjectives and verbs. It was exciting in a high degree, and at the conclusion of nearly three quarters of an hour, was taken up by the director, who pursued a little more rigid method, but none the less to the credit of the pupils.

This examination, at the suggestion of the director, gave place to that in Trigonometry. The teacher was probably inexperienced, and though I have no doubt honored the selection of the committee of examination as a man of acquisition, he lacked the gifts of readiness and grace in his instruction. He made his own diagrams, and performed all the solutions, instead of entrusting them to the pupils. The so drawn triangles were merely three lines intersecting each other, without limit of length; and the circles made each with two strokes of the chalk, a half circumference being allotted, in intention, to each stroke, were unfortunately no nearer circles, than the careless toss of two crescents would be likely to give. The characters he employed, purporting to be from the Greek and Roman alphabet, bore so little resemblance to the originals, that they were quite unintelligible. Altogether his class, though evidently composed of hard students, had to attribute their regard for mathematics to another circumstance than the charm of his mode of instruction. The geometrical drawings made by his class were exhibited. They consisted of planes, and solids, and projections of the simpler crystalline forms, all of which were exceedingly well done. I subsequently saw a suite of drawings of the steam engine models, belonging to the school, made by former pupils, which were quite faultless. The young artists are already architects or painters—one of them is now painting the interior of a church at Mayence.

Then came declamation in German and English. An extract from Childe Harold on the Rhine, was pronounced with unexpected excellency of emphasis and inflection. Then succeeded translations from German into English, of passages of which they were familiar, and of others which were new to them. They were thoroughly instructed, as I can testify from my acquaintance with their teacher.

This exercise was succeeded by a lecture from one of the boys some fourteen years old, upon heat, the thermometer, the principles of Natural Philosophy applied to the explanation of the various phenomena of freezing, thawing, raining, &c., which the teacher assured me had been very slightly corrected by him. It was certainly quite remarkable. Then commenced an examination of the whole class upon this branch of Natural Philosophy, conducted something as that had been in Moral Philosophy. It was highly satisfactory to the commissioners, and revealed the happiest talent in the teacher of interesting his pupils in what they studied. He asked them, among other things, what a man about to ascend Mt. Blanc should take for food? "Meat, because it is the most solid:" How would you prepare it?" "Boil it?" "Why?" "Least trouble." "What temperature does the proper preparation of meat require?" "212°." "Could you heat water to this temperature, in an open vessel, on Mt. Blanc?" Following this up with questions calling forth explanations, he gave the most satisfactory evidence of the thoroughness of their instruction.

Algebra succeeded Natural Philosophy, and though the teacher performed most of the solutions himself, there was a promptitude and eargerness displayed, in directing him what to write, that proved his having the secret of advancing his pupils. The achievments were not of the highest order—indeed not so high as I have known among young Misses of equal age. Still they were such as to indicate thoroughness on the part of the teacher.

In the afternoon, the exercises, commencing with a song, in which as before most of the pupils joined, were conducted in the same general manner as in the morning. The government commissioners, a few patrons, and a few strangers were present. Immediately after singing, the teacher of History commenced the examination of his class. It was most exciting to all, the audience as well as pupils. He opened by saying—"In the sixteenth century there was a war in Germany called the"——"The thirty years' war," shouted the boys. He resumed—"which commenced"——"in the year so and so,"—"at"—"such a place." "A battle occurred between"—the Generals' names were given, and so on. Occasionally a mistake was made by some one, which the teacher reproved by a deep expression of pity, regret, and surprise. The pupils were conducted through the history of Germany generally, and of their own state particularly.

Then followed an examination of the classes in French, including recitation and declamation.

Then succeeded organic Chemistry—commencing with the formation of starch in plants—their gum and sugar. Then the conversion of sugar into carbonic acid and alcohol. Then the absorption of oxygen by the latter, and the formation of vinegar. Then came a parallel between the egg and seed, showing how the seed contains in its nitrogenous ingredients something like the essential to the development of the chick. It was profoundly grateful to find in these boys a knowledge of the great fundamental principles of animal and vegetable physiology.

At the close of the day's examination, the director, in a very unfeeling manner, with no language of approbation or condolence, announced that of the second class, all would, at the commencement of the next term, be promoted to the first, except three, whose names he mentioned, and whose seats he pointed out. The lads, who were not poor students, but unfortunately of subordinate capacity, burst into tears. One of the teachers remarked to me—"The director knows very little of human nature—these boys are dispirited. They might have been saved."

The total independence of the teachers from all responsibility to parents, has its advantages doubtless, but it sometimes permits men, who, though possessed of intellect, lack the higher requisites of human feeling, to occupy situations of great responsibility, and to which they ought never to have been appointed.

This director is quite a little tyrant in his way. All the subordinate teachers approach him, though the inferior of many of them, as if he were the grand duke himself. Their salaries depend upon their being at peace with him. He knew Pestalozzi, and wrote a book which was thought to indicate fitness for such a situation, and thus gained it.

Teachers are removable only for misdemeanor, and are therefore at rest about their salaries and their living, when once connected with an Institution. The road to preferment is through the press; and hence it is that the German bookstores teem with such multitudes of books, given out every year.

The salaries increase with years, and when the teacher is too far advanced to perform his duties with efficiency, he is pensioned, and permitted to retire. The director receives $400; the teacher of Chemistry and Natural Philosophy $320; the others less, down to $100.

In Giessen, there are seven different kinds of schools. Three for the humbler classes, receive boys and girls of different ages, up to fourteen years. Two for the better classes; and the Real Schüle, and the Gymnasium, more nearly corresponding with our colleges, make up the number.

Every child less than fourteen years of age must attend school, upon penalty, in case of neglect, of the imprisonment of the father. The teachers are paid by government, though the parents must pay a part of the expense of tuition, directly.

Boys intended for the superintendence of mining operations; for apothecaries; for any of the avocations where profitable pursuit requires a knowledge of science, as well as all intended for the professions, are sent to the Gymnasium. Either of these schools receive pupils at six or seven years old, and they ordinarily continue in each till they complete its course.

The title of teacher and of Dr., if it had been conferred, belongs to those gentlemen who preside over the various departments of instruction in the Gymnasium and Real Schüle. Professor is conferred only upon those who hold ordinary or extraordinary professorships in the University.

The Misses, who will extend their education beyond the range of primary schools, are instructed by private tutors.

All young gentlemen destined to the University, must have passed through the Gymnastic course, which, in its classical and mathematical features, is quite equal to our college course.

Lightning diminished by Telegraphs.—We see it stated on various hands, that the multiplication of telegraphic wires through the country, is going to restore the electric equilibrium between different places. How will it do that, pray? A thunderstorm is often an accumulation of clouds five miles high, and forty miles in diameter, and a half a mile or more up to the lowest part. The earth itself is already an excellent conductor, and would do much more towards restoring equilibrium, by means of its ten thousand points, everywhere stretching upwards, in the form of hills and trees, than a few horizontal wires, twenty-five feet above its surface, with no upward points. The great mass of the fluid is miles above; and the little explosions in the telegraph offices, no more affect the electricity of these leagues of charged matter, than mid-ocean by the discharge of a pop-gun.

Agricultural Chemistry.—This has become so fashionable, (very useful indeed it is, in its place,) that the papers of the country are very largely sprinkled, if not literally filled, with the most absurd suggestions and conjectures, in constant attempts to explain everything scientifically.

AGRICULTURAL SCHOOLS—No. II.

No candid man, after due reflection, will deny that the elevation and improvement of agriculture, both in its character as a business in which masses of human beings are engaged, or as an occupation upon which the world depends for food, is of the first importance, and of deep and abiding interest to an agricultural state. Nor do I imagine that reflecting minds will hesitate in admitting as equally true, that education, improvement in agricultural science, and the intellectual advance of farmers, must of necessity form the chief element in elevating and perfecting the noblest and best of all callings, and the truest and most pleasing of all sciences. Education is the Archimedian lever, which will, with an irresistible power, raise to its real pre-eminence, the farming interest, and elevate to their rightful position the farmers of the country.

In no land upon which the sun shines, do the same inducements present themselves for mental improvement, and no where else can education work such magic influence for good to the masses, as here; for no where else has republican institutions placed upon an elevated level, all the people—here personal freedom is unrestrained—here no cruel social distinctions rise up to crush rising aspirations, and drive into hopeless obscurity rising genius. Here, too, the right to property is free, title to land unfettered, and industry and perseverance make it attainable by all. Here all may acquire knowledge—that better inheritance than gold or silver—for on every side the school house stands with open door, and invites all, almost without money and without price, to drink from their rich and pure fountains, for truth is always pure, and knowledge always rich, emanate when or where they may. It is indeed a goodly land, and I imagine there are but few among us who are not proud to call it "his own, his native land." But far as we stand in advance of other nations, we have not, I think, yet reached perfection; we have yet much to learn and much to do in order to progress and improve. In our educational department—in the elevation and improvement of our schools, much remains to be done, both by the state in her sovereign capacity, and by the people in their private relations. Legislators must enlarge their vision, and boldly advance with the light of science, and be prepared, with a wise and liberal hand, to give new and increased facilities for the spread of knowledge—and the education of the people, where common sense and sound judgment point the way. There is no danger of too many schools or too much learning; at least the farmers of the state have a wide margin on which to work, and a great advance yet to make, before they come up with other classes.

The idea, I think, is quite prevalent among men, that the business or pursuit of farming, requires little else but physical strength, powers of endurance, and capacity to labor—that it is a business of the hands and sinews, and not of heart and head—that any dolt can plow, and sow, and reap. While we grant that the above are essential to success in tilling the soil, we hold, as all right thinking men must hold, that they are subordinate to the higher and commanding power of intellect, and stand, in relation to the mental influence, in the same secondary capacity with the horse and the ox, and the passive machinery of the farm. In truth, there is no trade or calling, be it ever so intricate or nice, which requires more intelligence, sounder judgment, and more discriminating wisdom and forecast, than farming. In no business is there greater need of scientific knowledge—the farmer, above everybody else, if he would receive full recompense for his toil, should understand the power of chemical action—the results of the combination of simple substances—the changes produced by such combinations; for who, like the farmer, has so directly to meet and provide for the changes of the ever-changing weather; for heat and cold; for spring-time, summer, and autumn; for wet and dry; and for all the variations attendant upon these shifting scenes and circumstances. I know, indeed, that long practice and close observation will do much to fit the farmer for his business, but it cannot, from the nature of things, provide him all the information he needs; for there is a kind of knowledge which cannot be received by intuition, nor learned by simple observation: effects may thus be witnessed and scanned, and be often times rendered vastly useful in the conduct of the farm; but the farmer should *understand causes*, as well as witness effects, for then he can oftentimes manufacture effects indispensably necessary to his success. Scientific knowledge, combined with a quick perception, sound judgment, and every day practice on the farm, are the chief requisites for the perfect farmer; and the first requisite, and which after all is the best foundation upon which to build, it is idle to look for without agriculture is taught in our schools, as a distinct, separate branch of education. It is true that the principles of agricultural science are all about us; but it is also true that the wisest cannot comprehend or render them practically useful without much and patient study—long and critical examination—and by sure and oft repeated experiment; and all experience teaches us that it is difficult to *begin to acquire an education* in old age. Men acquire habits of thought as they do physical habits—and it is hard to break up old associations, and to commence to learn new things. Men sometimes indeed break through all obstacles and rules, and become celebrated scholars, after the meridian of life has passed. But there can be no doubt as to the rule, viz: that education, in order to become thorough and perfect, should begin in youth; and I can see no reason to except agriculture from that rule. Nor is there any occasion for its interdiction from the places where our youths commence the acquisition of knowledge, and where the mind first begins its disciplinary process. Impressions made in youth are hardly ever eradicated, and so of principles; relate they to morals or to science, when once impressed on the youthful heart, and when they are fully indented there, by days and years of constant drilling, will, in nine cases out of ten, retain their legibility, so long as life lasts. Men are always adding to tehir stock of knowledge; day by day they learn new facts, and acquire increased knowledge, and literally education is only finished with life, or the beginning of dotage. But such, I imagine, is not the true meaning, certainly not the generally received definition of the term: Education, in its usual acceptation, is a thing belonging to the earlier years of life—it is the storing up of knowledge to be used as occasion requires afterwards; the acquisition of facts and principles, rules and memoranda, to be used in all subsequent life, as occasion may require, or circumstances demand. If I am correct in this view of the subject, all must at once see the importance of introducing agriculture into our system of education, and of making it a permanent branch of study for those who expect or desire to till the soil for a livelihood. Is it not true that farming is governed by certain fixed principles that the soil in its combinations has certain fixed rules—that mother earth, in all her diversified forms, is yet governed by laws as unalterable as those of the Medes and Persians. In truth, earth, and air, and sky, with all the laws pertaining to each, are properly within the sphere of the farmer's study, and may, and should form part of his education. He toils, and sweats, and is sustained by hopes of a plentiful harvest; and should he not then be able to take full advantage of every law of production, to aid him in his labors, and to render certain the end he seeks? I here repeat, that it is idle to expect results, such as I have glanced at, without adequate means, viz: without introducing agriculture into our schools, and making it a fixed and permanent department of study and education. The great truths and principles upon which it is founded, should be indented upon the minds of our youth, by patient, persevering study; it should be begun in youth, and fixed in the memory as among the most useful acquisitions it can make for after life. And to accomplish this great and desirable end, I would establish in the state two or more agricultural schools. My idea is that these schools should be of the highest order, and that they should be liberally aided in their inception, and for the few first years of their existence, by the funds of the state—for in no other way can they, or will they, be established so as to become permanent. This I conceive to be the initiatory step—the starting point, towards a general system. Agricultural science needs some rallying point—some elevated position, where it can make itself known and respected, and from which it can scatter its precious influence over the entire state. Sound philosophy would dictate a commencement at the highest point, viz: with colleges, instead of district schools—for in a question of this character it is better and easier to expand from such a point—from a fountain broad and pure, than from one circumscribed and obscure. Let the minds of the farmers once be directed to this subject, by the establishment of an Agricultural College and Experimental Farm, in the east, in the centre, and in the west; let a few of their sons enter these institutions, and study the art and the science of farming; let it be clearly demonstrated that such a thing is practicable; and soon, in the natural and regular order of events, we shall witness the gradual spread of agricultural schools—an increased and increasing interest in agricultural knowledge—and in good time, most, if not all our district schools, will have a regular, permanent class studying and preparing, by acquiring a proper education, for farmers.

I have not time, in this paper, to enlarge, as I should like to do, on this subject. I ask the attention of the Legislature, now in session, to this important subject. No subject which can come before that body, is of more interest to a vast majority of the people than this—it concerns more than the present generation; it looks into the future, and in all time to come will distil its benefits and blessings. As legislators, look at the matter in its comprehensive aspects, survey the whole ground, and let no narrow or stinted policy prevail in your action—a few thousands now appropriated and wisely spent, will add millions of wealth to the state. Again I say, be not restricted in your action. When the bill now before you, for a school in the east, comes up for action, meet it in the spirit of an enlarged and enlightened liberality, and give, not only to the east, but also to the centre and the west. Adopt a system commensurate with the wants of the state, and be assured the people will thank you. D. A. Ogden.

CULTURE AND DISTILLATION OF PEPPERMINT.

It should not be surprising, that in a country so diversified in both soil and climate as is the United States, that we should learn every year of some new fruit, or grain, or vegetable, which lends its tribute to the augmenting wealth of the national prosperity. The primary staples of the nation have been subjects of long and familiar discussion, and improvements in their cultivation are constant and progressive. The minor products of the soil, which enter into the economy of general consumption, and add to the national wealth, are often little thought of save in the immediate localities of their production. In the report of Judge Ellsworth, late Commissioner of Patents, we have been informed of the great amount of white mustard, and the large profit which it has yielded to the producers, in a limited district of the western part of the country, and this, too, without withdrawing much time and attention of the growers from other crops of greater value.

In this section of New-York, there is an article alike valuable for its medicinal and other uses, which has been cultivated with great profit to the producers, that has hardly attracted attention even in the immediate neighborhoods of its production. I allude to the article of *Peppermint*, and its distillation into oil, and its manufacture into essence.

It is to invite attention to this subject, that I am induced to give you a brief history of its cultivation in this neighborhood. Its cultivation is principally confined to a few persons in Phelps township, in this county, and Lyons and Arcadia townships in Wayne county. It is cultivated without any serious interference with the necessary attention to other crops, and has yielded, for some years past, some fifty or sixty thousand dollars annually to the producers.

This species of mint was first introduced into this vicinity, by the Messrs. Burnett, some thirty years ago, who first planted it on the flats of the outlet of Canandaigua lake. They brought it with them from Ashfield, Massachusetts. They distilled it, and sold the oil, in the western part of New-York and Canada, at prices varying from five to fifteen dollars per pound, and realized, from small beginnings, each a handsome fortune. When the oil is diluted into essence, the profits are very great.

This mint differs from what is generally called spear mint. The peppermint has a larger stalk, and a larger leaf, than the spear mint. In rich ground it will grow from two to two and a half feet high.

The principal expense in its cultivation is in procuring the roots for the first year's crop; and the chief labor is in the first year's cultivation. The ground should be rich, and should be carefully plowed in the fall or spring, so as to be entirely free from grass and weeds.

It is cultivated from the roots, which should be planted in the spring, in drills from eighteen inches to two feet apart, and should be cultivated carefully with the hoe until after mid-summer, at which time it sends forth runners or shoots, like the strawberry, and covers the entire space planted, sending forth innumerable branches and stocks. It is cut in the fall when matured, and distilled into oil. The roots remaining in the ground during winter, vegetate in the spring, and covering the entire space planted, require no cultivation the second year, and so also of the third year. By the end of the third year, the ground becomes so exhausted, and so infested with grass and weeds, that it is necessary to plow up the roots, and plant fresh grounds. So the first year is the only one of expense or labor in the cultivation, as it requires no cultivation the second and third years. The crop is exhausting to the land. Lands have rented from eight to ten dollars per acre for the purpose of raising this mint upon them.

If the seasons are favorable, and the lands rich, the crop the first year will yield mint that will produce from ten to thirty pounds of oil to the acre. The second year (which is the most productive) from twenty-five to forty pounds; and the third year from ten to thirty pounds.

The process of distilling the mint into oil is simple: The mint when mowed, on maturing, is placed in an ordinary still boiler with water, and fire is placed beneath. The evaporation is condensed in a retort, and the oil being of less specific gravity than the water, floats on the surface. The water in the retort is permitted to escape by a tube beneath the surface of the water in the retort, on which the oil floats. The mint after being distilled, is taken from the boiler with a hook, and the boiler filled with fresh mint and water until the whole crop is distilled into oil.

The process of purifying it from all extraneous matter, is to filtrate the oil through clear white paper. It is then placed into tin canisters, containing about twenty-five pounds, and tightly corked and sealed, and is then prepared for market.

Many persons, who have cultivated it for years, have realized handsome fortunes, and without interfering with the regular production of other crops on their farms.

I may state, in conclusion, that for several years past the speculators of the cities have monopolized by private purchase, nearly the entire crop in this region, and this year they have purchased *the mint*, and *destroyed the most of it*, so as to demand a greater advance on the last year's supply of oil.

ELIAS COST.

Oaks' Corners, Ontario co., N. Y., Sept. 1, 1847.

BROOM MANUFACTORY.

HAVING a few hours to spend at Schenectady about the 1st of September last, our friend, Mr. CHARLES H. TOMLINSON, kindly accompanied us to several places in the vicinity, and among the rest to the broom manufactory of Messrs. VAN EPPS.

They have been engaged in the business about eleven years. They have a farm of about 300 acres—200 of which are Mohawk flats. A large portion of the flats was formerly of little value, in consequence of being kept wet by a shallow stream which ran through it, and which, together with several springs that issue from the sandy bluff on the south side of the flats, kept the ground marshy, and unfit for cultivation. By deepening the channel of the stream, and conducting most of the springs into it, many acres, which were previously almost worthless, have been made worth $125 per acre. They have also, by deepening the channel, saving the water of the springs, and securing all the fall, made a water privilege, on which they have erected an excellent mill with several run of stones, leaving, besides, sufficient power to carry saws for cutting out the handles of brooms, &c.

They have, this year, about 200 acres of the flats in broom-corn. The cultivation of this article has within a few years, been simplified to almost as great a degree as its manufacture. The seed is sown with a seed-barrow or drill, as early in spring as the state of the ground will admit, in rows about 3½ feet apart. As soon as the corn is above ground, it is hoed, and soon after thinned, so as to leave the stalks 2 or 3 inches apart. It is only hoed in the row, in order to get out the weeds that are close to the plants—the remaining space being left for the harrow and cultivator, which are run so frequently as to keep down the weeds. The cultivation is finished by running a small double mould-board plow, rather shallow, between the rows.

The broom-corn is not left to ripen, as formerly, but is cut while it is quite green, and the seed not much passed the milk. It was formerly the practice to lop down the tops of the corn, and let it hang sometime, that the "brush" might become straightened in one direction. Now the tops are not lopped till the brush are ready to cut, which, as before stated, is while the corn is green. A set of hands goes forward, and lops or bends the tops to one side, and another set follows immediately, and cuts off the tops at the place at which they were bent, and a third set gathers the cut tops into carts or wagons, which take them to the factory. Here they are first sorted over and parceled out into small bunches—each bunch being made up of brush of equal length. The seed is then taken off by an apparatus with teeth, like a hatchel. The machine is worked by six horses, and cleans the brush very rapidly. It is then spread thin, to dry, on racks put up in buildings designed for the purpose. In about a week, with ordinary weather, it becomes so dry that it will bear to be packed closely.

The stalks of the broom-corn, after the tops have been cut off, are five or six feet high, and they are left on the ground, and plowed in the next spring. It is found that this keeps up the fertility of the soil, so that the crop is continued for several years without apparent diminution. It should be observed, however, that the ground is overflowed every winter or spring, and a considerable deposite left on the surface, which is undoubtedly equivalent to a dressing of manure. This may be inferred from the fact that some of the flats have been in Indian corn every year for forty or fifty years, without manure, and with good cultivation has seldom produced less than sixty bushels per acre, and with extra cultivation, from eighty to ninety bushels have been obtained. In case of need, the stalks would furnish a large amount of good food for cattle. They are full of leaves, which are very nutritive, and whether cut and dried for winter, or eaten green by stock turned on the ground where they grow, would be very valuable in case of deficiency of grass.

Messrs. VAN EPPS employ twenty hands during the summer, and in autumn, when the brush is being gathered and prepared, they have nearly a hundred, male and female. They are mostly Germans, who come here with their families during the broom corn harvest, and leave when this is over.

The manufacture of the brooms is carried on mostly in the winter season. The quantity usually turned out by Messrs. V. E. is 150,000 dozen per annum.

TO SAVE HICKORY FROM WORMS.—A correspondent of the *Prairie Farmer* says, that to prevent the common evil of hickory timber becoming worm-eaten, it must be cut during the last half of July, or first half of August. This is stated to be effectual. Does this depend on the habits of the insect, or the quality of the timber at this season?

RURAL NOTICES ABROAD—No. IX.—By Ik. Marvel.

Wines and Vineyards of France.—I have already taken occasion to speak incidentally of the general appearance of the French vineyards. They belong, by association, to all our ideas of French landscape, and make up as important a feature in the rural aspect of the country, as the corn fields in the northern states of our Union.

Still, it must not be supposed that the wine culture belongs to every district of France. Through the whole northern third of its territory, vineyards are rarely met with, and only upon some warm slope exposed to the sun, or in some closely sheltered valley. Indeed the sunny slopes are the favorite situations for vineyards throughout France; in more southern countries, a flat surface, and even a northern exposure, have been preferred. The soil most generally favorable is calcareous—such is the famous grape land of the *Côte d'Or*, from which come the finest of the Burgundies—such, also, is the better portion of the *Côte Rotie* by the Rhone, being a calcareous belt lying between gneiss rock. The vineyards of Champagne are also of the the same general character.

A stranger, passing only by the great diligence routes through France, would be rather surprised at the absence of vineyards, than at their frequency—the great roads passing, for the most part, over broad plains which are unsuited to the grape culture. Between Dijon and Chalon *sur Saone*, however, the traveller will pass through the richest of the Burgundian vineyards; and if he be not shut up to a tedious night-ride, he may see every slope upon his right, looking eastward, covered with vines. They ascend in terraces, and upon shelves of the crumbling rock, till they reach a height of a thousand feet. The soil is a yellowish red, and full of the broken limestone. The vines are low, not thrifty in appearance, and clusters and grapes are small, yet from them come the much prized *Chambertin*, *Mints*, and *Branne*. From this golden hill-side, as it is expressively called, rich meadows stretch twenty leagues away to the heights of the Juras; and looking back from those heights, near the little town of Poligny, a scene of agricultural magnificence is presented, unsurpassed perhaps in the world. Fir forests stretch down the sides of the mountains around you—between them, perhaps, a grassy valley, on whose warmest edge a few vines are cherished, and in its bottom a brook, that tumbles away through green pasture-lands and cornfields, and orchards, till it empties into the river Doubs, lying like a silver thread in the plain. Then grass, and wheat, and vines alternate, till the first lift of the *Côte d'Or* is seen, in yellow soil, and yellow vine leaves scarce turned blue in the distance.

The vine is propagated universally by cuttings; and as quality of wine is found to depend more upon situation of vineyard, than any natural characteristic of the fruit, not so much attention is paid to growth of new sorts, as might at first be supposed. It is found, indeed, that the same grape, upon lands not a league apart, will produce totally different sorts of wine.

The grape which produces the delicious Constantia at the Cape of Good Hope, is said to be the same in appearance, with that of many indifferent vineyards along the Rhine. Nor are the best wine grapes by any means the most palatable to the taste. Fruit from many of the favorite vineyards, is, from its acid taste, totally unfit for the table. And though the vineyards in France are so world-wide in reputation, almost any country can furnish equally good, if not better grapes for the table. It was rarely that I saw, in the Paris market, fruit superior in appearance to that grown in the graperies of this country.

I have, in a previous letter, spoken of the method of pressing out the wine in the choice vineyards of Burgundy. The older vines furnish the best wine, though a far less quantity than the new vineyards. Seasons vary much in their products, and not unfrequently a very large vintage is comparatively worthless; and Chambertin becomes *vin ordinaire*, or the ordinary drink of the peasantry. That a large portion, however, of this inferior product reaches this country under its reputable name, is very probable—it is, in nineteen cases in twenty perhaps, the refuse stuff, by which our pretending dinner-talkers form their notions of *les bons vins* of Burgundy.

I may be pardoned for dispelling another pleasant illusion: The vineyards of Chambertin—the favorite wine of Napoleon, and of emperors of our time—covers only from fifteen to twenty acres of ground. You cannot buy a bottle of the wine at an inn, within a stones throw of the vineyard, for less than 8 to 10 francs, ($2.) Yet I have found the same, at a less price, in half the hotels between Niagara and Saratoga! Who would be so foolish, in view of this, as to go to France to drink wine?

Along the Rhone, are to be seen the favorite vineyards of the *Côte Rotie*, the Hermitage, and St. Peray. The latter differing from most others in lying upon a gravelly, granite soil, which is manured with decayed leaves. The dressings of the other two are for the most part sheep and horse-dung.

The Hermitage is better known by name than taste; and is more frequently seen on the bills of our enterprising inn-keepers, than in their cellars. The whole extent of the vineyard is about 300 acres, lying along the bank of the Rhone, in such way as to be exposed to the full play of the sun. Its name is derived from a little ruin on a height, where it is said a hermit lived many years ago, and cultivated a small spot with vines which were found to yield the richest wine of the country. It is needless to say that the old hermit is long since dead; that the vineyard has quadrupled its size; and that the wine has lost none of its flavor.

The red Hermitage, of best quality, is purchased by the wine merchants of Bordeaux to mix with the better clarets; and the white, though you might be troubled to find it pure at Lyons or Marseilles, I dare say you can find, at $2 the bottle, at any inn in Schenectady or Chicago. And though gentlemen of the neighborhood would speak diffidently of its qualities, there are plenty of coxcombs in New-York and Buffalo, who will dilate upon its aroma and body.

The St. Peray is a sparkling wine, not unlike Champagne, and more wholesome from the fact that it receives its sweetness from the saccharine qualities of the grape, and not from the syrup which is mixed with Champagnes. The fruit is of a bright yellow color, with the exception of some portion of the vineyard, on which is grown a red-skinned grape, from which is made a rose-colored wine.

The fruit ripens by the middle of September, and the wine is treated very much in the same way with the Champagne wines—of which I may have something to say in another paper.

SMITH'S PATENT LEVER DRILL OR GRAIN AND SEED PLANTER.

I take the liberty to send you a description, having not as yet been able to procure a cut, of the Patent Lever Drill, or Grain and Seed Planter, introduced by me, and for the first time presented for general inspection in the State of New-York, at the State Fair at Saratoga.

The drill has been used in England many years, and a fair specimen of the original, a very complicated and cumbrous machine, was there also.

The first improvement on the English drill, in this country, was made by, and patented to, Mr. **Pennock**, of Pennsylvania, some six years ago—a very excellent machine, light, easy to operate with, but also complicated, and by many considered too much so, for general and indiscriminate use. This, however, is well worth $100, the price it sells for.

The inventor of the drilling machine, introduced by me, Mr. H. W. **Smith**, also of Pennsylvania, has spent several years to improve the same, by making it perfectly simple, at the same time retaining all the important principles, and adding such others, as modern scientific discoveries in husbandry, rendered necessary to perfect the work—this is sold for $75.

This drill has some new mechanical principles or combination of principles not before in use.

The wheels are of new and simple construction.—The axles are of cast iron, extending half the width of the machine, with a flange some six inches in diameter on the end, which, with a cast iron plate of the same dimensions, screwed on the wheels, retains the spokes, and forms the hub. These wheels and axles may be adapted to carriages, wagons, &c.

On the axles are cast also the cylinders, three on each, in which indentations or holes are drilled, to carry the grain through valves, out of the hopper, a box extending the width of the machine, into tubes, through which it is deposited in the furrow.

It has a lever by which all the teeth can be lifted out of the ground, for the purpose of turning in the field, or passing over a rock, or packing to remove to or from the field, by a single operation; and another to close the valves and shut off the feed at the same time.

It has a graduated index, by which it can be set, to pass any given quantity of seed per acre, or altered from one quantity to another in a few seconds. *This cannot be done by any other machine, so as to insure uniformity and certainty, without some mathematical calculation, and much time in testing its accuracy.*

The teeth are long to prevent clogging, and can be easily cleared by the operator, in case they should gather grass, &c. They are bent something like cultivator teeth, and are made to cut a furrow three inches wide at the bottom, where the seed is deposited, at any required depth, through the tubes which are fastened to the back of the teeth. The depth can even be adjusted by a regulator, in which the back end of the pole is inserted. After the seed is deposited, the earth falls back and covers it.

The operation of this machine, after the grain is planted, leaves a slight furrow, the sides of which are abraded by the action of every shower, and a portion of the soil is periodically carried on and around the roots of the grain, covering them a little more each time; and thus, by a course of natural cultivation, the surface is kept new—no crustation takes place to retard the growth of the young and tender plant—the atmosphere and gases readily permeate the soil, and the continued cumulation of soil on the roots prevents destruction, or heaving out by frost.

The position of the furrows has a tendency to concentrate the gases from the atmosphere, when brought down by showers, around and in immediate contact with the roots of the grain—from that circumstance it will require longer time to evaporate those gases, and give the plant more time and better opportunity to draw a greater supply of sustenance from that source. The consequent rapid growth and strength of the plant, enables it more effectually to resist, or overcome and outgrow, the otherwise destructive action of the "fly;" and the uniformity of its growth, and exposure to the light and atmosphere, prevents rust and mildew, in those situations where otherwise it would be subjected thereto.

With this machine, a boy, and pair of horses, ten acres per day are readily planted, and five pecks of seed are equivalent to two bushels per acre, sowed broadcast—for the reason, that with the drill machine, the grain is distributed evenly, and buried at a uniform depth, and every sound seed vegetates; while, on the contrary, in the broadcast system, there can be no certain uniformity in sowing. Or if sowing machines are used, and the seed scattered evenly over the surface, still there is, and can be, no certainty that any particular or definite quantity per acre will be applied; for I have as yet, never seen or heard of a sowing machine graduated to regulate the quantity per acre. Again, whether sowed by hand, or with a machine for that purpose, the grain cannot be covered equally at a uniform depth.

If the harrow is used, some part is not covered, and is left a prey for the birds; some so slightly covered, that the first shower subjects it to a similar disposition; or, if left, its growth is retarded, if it does not perish the first drought; others again covered so deep as to prevent a uniformity in the growth of the crop, subjecting the more sickly plants to destruction by the "fly."

If the cultivator is used to cover the grain, the consequences may be still more injurious. In addition to those resulting from the use of the harrow, the grain is deposited under the ridges, and instead of the earth gradually cumulating on and around the roots, by showers, it is washed away from them, and the gases are farther removed, and do not, while evaporating, so readily come in contact with the grain.

I have thus in relation to only one of the operations of farming, the seeding part, as connected with the drill machine, enumerated several circumstances which have a tendency to diminish the crop, and others by which it may be enhanced; each of these circumstances, and doubtless there are others, is trifling, considered in reference to itself, or the single plant influenced thereby; but when the whole is considered collectively, we can readily see where great improvements may and will be made in the art and mystery of farming.

The fact then becomes evident, aside from practical demonstration,* that by the use of the drill, the great aggregate result, from the several minor causes and considerations before named, with the saving of seed, is an actual gain and increase of product of 25 per cent. over any and all other practice.

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* See Farmer's Library and Monthly Journal of Agriculture for June, 1846.

In conclusion the following astounding suggestion is presented, that, if all the land now under grain culture in the state of New-York, was adapted to the drill, and that alone used, the value of the actual increase of the wheat crop alone, would amount to near *four millions* of dollars, and of other grain about *three millions* of dollars. From these considerations, I am free to say, that the Patent Lever Drill or Seed Planting Machine, is the most valuable, wealth-increasing, agricultural implement ever introduced, since the cast iron plow first made its appearance. Very respectfully, yours, &c., C. MASTEN. *Penn Yan, Sept.* 21, 1847.

[We understand these drills will be manufactured and for sale at Rochester, Geneva, and Penn Yan, where Mr. MASTEN resides, who will dispose of rights to manufacture them in other places.—ED.]

THE ORCHARD AND THE GARDEN.

BUDDING ONCE MORE.—An article of mine, proposing some improvements in budding young trees, appeared, I think, in your Oct. number, 1846, and received several subsequent notices Now, sirs, I frankly state, that I think I was too hasty in adopting notions expressed in that article. With too little time for a fair experiment, I drew some conclusions the value of which I now question. For example:—At the time I wrote I had several budded peach trees and pear trees, that were budded in July, and topped down in order to secure a present year's growth, and thus gain a season. I can now state the result: which was, that I saved not a single bud thus got forward, from the winter. Not being well wooded, they all died. And, agreeably to a suggestion of one of your most experienced correspondents, one tree itself also died—not probably, as he supposed, by being poisoned by the dead bud inserted, but being too much cut down, and by being deprived of its *leaves* in a growing part of the season, when a tree could hardly live without lungs. No tree can be deprived of its leaves by grafting, budding, or feeding silk worms, without endangering its growth and existence. I conclude that the old way of budding, with a very slight topping, is yet the best.

One word on transplanting trees:—Some little experience induces me to think that peach trees, and perhaps other *small* trees, may be transplanted any month in the year, by adopting the following suggestions:—First, clip off most of the leaves. With the leaves on, a rapid evaporation of sap takes place, seen in the wilting of the leaves, and if continued, will soon be seen in the shrivelling of the bark. Consequently we secondly suggest the keeping of them as short a time as possible out of the ground. Thirdly, it is of incalculable importance in taking up trees, that the ground be loosened by a crowbar as far as the roots extend, and that *all* of the roots be obtained. You are very much mistaken if you suppose you have purchased fifty trees, if the vender has not sent you the *roots*. And having obtained the roots of your trees, you will find it no easy matter to set them out again without liberal *holes* for them. And to have your ground rich, is as necessary for success as where you are designing a good harvest of corn. The smaller the trees when taken up, the better.

Messrs. Editors, will you tell me why my Isabella grapes, during August, this year and last, are very much given to rot upon the vine? Is there any remedy? R. T. *Prospect, Conn.*

N. B. I tried budding in May from scions, cut early for grafting, and did not succeed in making one grow.

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DUBOIS' EARLY GOLDEN APRICOT.—This is a seedling variety, originated by our neighbor, Mr. CHARLES DUBOIS, of Fishkill Landing, N. Y. It has attracted our attention for two or three years past, and as it appears well worthy of something more than a local reputation, we have procured specimens from the original tree, and now publish a correct description of this new variety.

Though this apricot is of small size, and simply good flavor, it has two qualities which will, we think, render it popular among fruit cultivators. The first is its great productiveness at all seasons; and the second, its comparative exemption to the attack of the curculio.

We may give a pretty correct idea of the *Early Golden Apricot* by saying that the crop of fruit borne by the original tree (which is growing in common loamy soil without preparation) has been sold in the New-York market, for the last three years, at prices varying from $4 to $16 per bushel. In 1844 the crop of this tree brought $45; in 1845, $50; and the last year it was sold for $90. The fruit is very fair in appearance, and bears carriage to market well.

Mr. DUBOIS, who is a pretty extensive orchardist, finds that in seasons when the fruit of the *Moorpark*—one of the best and surest sorts—nearly all drops before maturity, stung by the curculio, that of the *Early Golden* hangs in rich clusters on every limb. With him, indeed, this sort among the apricots, appears to be avoided by this insect, in the same way that the common *Damson* does among plums—probably from the thickness or some other peculiarity of the skin.

We cannot but think, therefore, that in all parts of the country where the sorts of apricots already in cultivation fail because stung by the curculio, this variety will be likely to give abundant crops. The tree, probably from being a native seedling, is also more thrifty and hardy than most other sorts.

Mr. DUBOIS has propagated quite a stock of young trees, and will, in the autumn, supply orders at a very moderate price.

Dubois' Early Golden Apricot.—Fruit small, about 1¼ inch in diameter, roundish-oval, with the suture narrow but well marked, but extends only half way round. Skin smooth, uniform pale orange. Flesh orange, moderately juicy and sweet, with a very good flavor; separates from the stone. The latter is oval, very little compressed, kernel sweet. Ripens from the 10th to the 15th of July, ten days before the Moorpark.—*Hort. for Aug.* [See adv. in Oct. number, p. 325.]

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SOIL FOR YOUNG TREES.—We believe it is generally admitted, that transplanted trees succeed best when their early growth has been in soil similar to that for which they are destined to be placed permanently. If raised in such soil, and transplanted to that which is thin and poor, they seem to receive a shock from which they with difficulty recover. As a gentleman once remarked, it is like feeding a calf with all the milk he will take till he is six months old, and then suddenly turning him off to live on a short pasture.

Mr. CHARLES H. TOMLINSON, of Schenectady, who has of late years been much interested in the culture of fruits, informs us that trees grown in nurseries on the rich alluvial lands of the Mohawk, do not thrive well for some time when set in the soil of the surrounding hills. After several trials, he concluded to raise his trees from seed on land of the same kind on which they were to stand. For this purpose he appropriated a part of a field lying on the side of a hill, the soil rather thin and slaty, to a nursery. He has succeeded in growing apple, pear, plum, and cherry trees on this land, by keeping it entirely clear from weeds, without manure. They are healthy, well-shaped stocks, the wood sound and well seasoned, and of sufficient size for their age. We noticed some plum stocks of the present year's growth that were over five feet high, and some pears which had grown nearly as much. The trees so produced, are transplanted at the proper time, and suffer no check in growth. They are more hardy and thrifty than those taken from the flats.

Grafting the Pear on the Mountain-Ash.—Mr. Tomlinson has tried this repeatedly, but it does not succeed. The graft outgrows the stock, and after a few years declines and dies.

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Nomenclature of Fruits.—In order that the Pomological nomenclature may be amended, where errors exist, I send you annexed a list of names of Pears that still exist in the American catalogues, which are merely synonyms of the true and established names; and being consequently mere repetitions, their use serves only to mislead and create confusion. I have not included any of the synonyms that are enumerated in Downing's work on Fruits, that being deemed superfluous, save in the few instances where an asterisk (*) is attached, and in which that gentleman has been inadvertently misled—the corrections of which will, no doubt, be made by himself in the forthcoming edition of his work. Wm. R. Prince. *Lin. Bot. Garden and Nurseries, August* 25, 1847.

* Angora,
Beaumont,
Belle Heloise,
—— de Berry,
Bernard,
Beurre Ananas,
—— Aurore,
—— Blanc de Nantes,
—— Bruneau,
—— Chaptal,
—— de Noirchain,
—— de Waterloo,
—— Lefevre,
—— Piguery,
—— Royal,
—— Thouin,
Bezi de Caen,
Bonaparte,
Bonchretien de Bruxelles,
—— d'Auch,
—— Napoleon,
—— sans pepins,
Bourgmestre,
Bowdoin,
* Capsheaf,
Captif de St. Helene,
Chenille,
* Charles d'Autriche,
* Charles of Austria,
De Livre,
Doyenne d'hiver nouveau,
—— d'Alencon,
Duc de Bordeaux,
Duchesse de Berry,
—— —— d'ete,
—— —— d'hiver,
Esperin,
Fourguois,
Glory of Cambrone
Gros Rateau gris,
Great King Louis,
Grosse Angleterre,
Henkell,
Howland's Winter,
Long Green Swiss,
Louise de Bologne,
Le Cure,
Maria Louise bis,
Melon de Namur,
Monsieur,
Mouthwater,
Moorfowl Egg, *of Boston*,
Mouille bouche,
Noirchain,
Oken d'hiver,
Orpheline d'Engheim,
Petite Cuisse Madame,
Poire de Louvain,
—— de M. Bonnet,
—— Neill,
* Pitts' Prolific,
—— Marie Louise,
* —— Surpasse Marie,
Prucelle de St. Onge,
Roi de Louvain,
—— de Rome,
Sabine,
Sans pepins,
St. Nicholas,
Shakspeare,
Soldat Laboureur,
Sublime gamotte,
Sylvanche verte,
Surpasse Marie,
* —— —— Louise,
Trois Jours,
Turkish Bonchretien,
Webber's Autumnal,
Waterloo,
Winter Virgalieu.

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Rose Bugs.—I have been looking over the last three volumes of the Cultivator to see if I can find any information in regard to keeping rose bugs from vines or plants. I do not find anything to answer our purpose. The way rose bugs have increased for a few years past is a "caution" in the full sense of the word. Formerly e scarcely saw enough to notice them, but this year y came upon us almost like the locusts upon Egypt. But though they did not eat *all* the "herb of the land and every green thing," yet they were not very fastidious in respect to their diet. We have some fine Isabella grape vines in our garden, and from their appearance we anticipated a crop of about ten bushels; but we shall hardly get twice as many bunches. The bugs "came and destroyed them all." We resorted to various expedients as preventives, but in vain. A steep of tobacco—half a pound of tobacco boiled in a gallon of water, and when cold sprinkled over the leaves, had no perceivable effect. To pick them off would have been impossible—for if out in the field while they were flying about, you might stand still for hours, and hard work you would have to keep yourself clear of them. I think I took a pint from one rose bush one morning, and in a few hours they would not have been missed. Besides eating grape blossoms and leaves, and roses—or rather rose buds (for a full blown rose was seldom found)—they eat clover blossoms, bean, corn, briar, and apple tree leaves, and even apples and peaches after they became as large as walnuts. From their first appearance to the time they disappeared was about three weeks. If they increase as much for two years to come as they have for two years past, I don't know but they will equal the locusts in their devastations. If you, or any of your numerous readers, know of any remedy, making it known in the Cultivator would confer a great benefit on *one* if not *many* of your subscribers. W. L. Eaton. *East Ware, N. H., Aug.* 7, 1847.

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Starting Buds too soon.—A correspondent in the *Genesee Farmer*, thinks he has made a discovery by the accidental breaking off of the stock just above the inserted bud, which caused the bud to grow immediately. He will probably discover next spring that the winter has totally killed the shoot, if it is a peach, apricot or nectarine; and by the end of another summer, that he has gained nothing in growth, if hardy, like the apple, a few inches growth this year, rather stunting than accelerating growth.

Watermelons.—A Trenton correspondent of the *Horticulturist*, says the best watermelon he has ever seen, is a round thin-rinded sort, known as the *Imperial*.

The Black Pear of Worcester.—Cheever Newhall, of Dorchester, Mass., says that one of his neighbors, who cultivates this pear largely, has realized for several years past, *ten dollars* per barrel, for his whole crop, by shipping them abroad. The tree bears heavy crops.

The Harvard Pear.—The original tree of this variety is standing at Cambridge. The trunk 4 ft. above the ground, mersures 4 ft. 2 inches in circumference.

The Baldwin Apple.—This fine apple does finely in western New-York, which has a climate much similar to that of Massachusetts; but at Cleveland, Ohio, it suffers from specks of black or dry rot, like those so common in the Pennock.

Varieties of Pears.—T. Rivers, of the celebrated Sawbridgeworth nursery, England, has about 900 varieties of the pear, under trial. Robert Manning, of Salem, Mass., has about 800. Probably not forty of all of them are fully first-rate, or worthy of extensive cultivation.

Confusion.—A. Bryant, of Princeton, Ill., states that four different varieties of apples have been sold there as Esopus Spitzenburgh, and it is still doubtful if they have the genuine.

Pœnias.—The four most splendid pœnias are perhaps the Whitleii, Humei, Pottsii, and Reevesii—the first white, the second deep rose, the third dark crimson, and the fourth fine rose—all very large and double, the flowers five to seven inches in diameter.

PREMIUMS AWARDED AT THE NEW-YORK STATE FAIR, 1847.

CATTLE—Class I.—Durhams.

Bulls over 3 years old.—1. Bell & Morris, Westchester county, "Marius," $20—2. H. N. Cary, Marcy, "Oregon," $15—3. J. B. Packer, Charlton, "Tecumseh," Herd Book.

George Vail, for his bull "Meteor," received certificate.

Two years old Bulls.—1. Z. B. Wakeman, Herkimer co., "Young Meteor," $15—2. George Vail, Troy, "Buena Vista," $10.

Yearling Bulls.—1. E. P. Prentice, Mount Hope, "Beppo," $10—2. D. D. Campbell, Schenectady, $5.

Cows.—1. Geo. Vail, "Hilpa," $20—2. E. P. Prentice, "Charlotte," $15.

Two year old Heifers.—1. Z. B. Wakeman, "Sylvia," $15.

Yearling Heifers.—1. Geo. Ohlen, Schenectady, "Lilly," $10—2. D. D. Campbell, $5.—3. Jane T. Gould, Troy, "Jenny," Herd Book.

[☞ In addition to the cash prizes mentioned, each of the above persons received a copy of the American Herd Book.]

Bull Calves.—1. Z. B. Wakeman, "Kirkleavington," $5—2. Geo. Vail, "Major," Washington's Letters.

Heifer Calves.—1. Geo. Vail, "Willy 4th," $5.—2. Geo. Vail, "Willy 3d," Wash. Letters.

Class II.—Herefords.

Bulls 3 years old.—George Clarke, Otsego co., "Major," $20.

" 2 " Edward Wells, Fulton co., "Fulton," $15.

Cows.—Edward Wells, "Adelaide," $20.

Class III.—Devons.

Bulls 3 years old.—Nelson Washbon, Butternuts, Otsego co., "Baltimore," $20.

Bulls 1 and 2 years old.—1. S. A. Law, Meredith, Delaware co., "Rover," $15—2. Nelson Washbon, $10.

Bull Calves.—1. Nelson Washbon, $5—2. Nelson Washbon, Wash. Letters.

Cows.—1. Nelson Washbon, "Connecticut," $20—2. Same, "Baltimore," $15.

Heifer Calves.—1 & 2. Nelson Washbon, for his heifer calves, $5, and Wash. Letters.

Class IV.—Ayrshires.

Yearling Bulls.—1. E. P. Prentice, Mount Hope, "Dundee," $15.

Cows.—1. C. N Bement, Albany, "Fairy," 5 years, $20—2. E. P. Prentice, "Ayr," 9 years, $15.

Heifers 2 years old.—1. E. P. Prentice, "Mida 1st," $15—2. C. N. Bement, "Maggie," $10.

Bull Calf.—C. N. Bement, "Roderick Dhu," $5.

Heifer Calf.—1. E. P. Prentice, "Mida 2d," $5.

Class V.—Cross and Native.

Cows 3 years old.—1. John Lee, Cambridge, Washington county, $20—2. N. Washbon, $15—3. Phineas Fletcher, Saratoga Springs, $10.

Two years old Heifers.—1. C. N. Bement, $15—2. N. Washbon, $10—3. David Gillett, Butternuts, Otsego co., $5.

Yearling Heifers.—1. John Lee, Cambridge, Wash. co., $10—2. C. N. Bement, $5—3. Joshua Bliven, Saratoga Springs, "Fanny," Vol. Transactions.

Heifer Calves.—1. John Lee, $5—2. H. H Lawrence, Saratoga Springs, Wash. Letters.

Bulls.—1. Maynard Deyoe, Saratoga Springs, Col. Tour.—2. Joseph Wood, Greenfield, Wash. Letters—3. Daniel Beers, Ballston, Transactions

Working Oxen—best yoke.—1. Elon Sheldon, Sennet, Cayuga co., aged 4 and 5 years, $15—2. Pliny Gould, East Nassau, Rensselaer co., 4 years old, $10—3. John Lee, pair twins, 5 years old, Transactions.

Three years old Steers.—1. Elon Sheldon, $10—David Gillett, $8—3. James S. Wadsworth, Geneseo, Livingston co., Transactions.

Best 10 yoke Steers.—1. James S. Wadsworth, $15.

Best 2 years old Steers—1. Elon Sheldon, $10—2. Lewis E. Smith, Halfmoon, Saratoga co., $5—3. H. N. Cary, Marcy, Oneida co., Transactions.

Yearling Steers.—1. A. Gilbert, Hamilton, Madison co., $8—2. James P. Noxon, Stillwater, Saratoga co., $5.

Boys training pair 3 years old.—1. J. N. Adams, Butternuts, Colman's Tour.

Training pair yearling Steers.—1. A. S. Gilbert, Colman's Tour.

Milch Cows.—1. Ambrose Stevens, New-York, Durham cow "Grace," 6 years old, Diploma—2. E. P. Prentice, Durham cow "Esterville," 5 years, Herd Book—3. H. N. Cary, Durham heifer "Rose," 3 years, Trans.—4. John Lee, native cow, Trans.—5. H. H. Lawrence, Trans.—6. Wm. Wolford, Albany, "Red Daisy," Trans.

FAT CATTLE.

1. Warren Halsey, Trumansburgh, Tompkins co., $15—2. Edward Morrison, Sennet, Cayuga co., $10—3. John B. Holmes, Saratoga, Colman's Tour.

FAT SHEEP.

1. Z. B. Wakeman, Herkimer, $10—2. J. McD. McIntyre, Albany, Colman's Tour.—3. L J. Van Alstyne, Canajoharie, Trans.

HORSES.—Class I.—All work.

Stallions.—1. Joseph Milliman, Greenwich, Washington county, "Chief Justice," $15—2. Simeon Christie, Mayfield, Fulton co., "Young Dread," $10—3. Daniel A. Cornell, Pittstown, Rensselaer co., "Peacock Diamond," Youatt on the Horse—4. Lorenzo M. Lown, Sandlake, "Rockingham," Vol. Trans.

Mares.—J. B. Burnett, Syracuse, $15—2. Joseph Daniels, Greenfield, $10—3. Henry W. Dennis, Saratoga, Youatt—4. Maynard Deyoe, Saratoga Springs, Trans.

Class II—*Draught Horses.*—1. Wm. Larman, Pittstown, Rensselaer co., "French Emperor," $15.

Class III—*Blood Horses.*—1. Ed. Long, Cambridge, "Tornado," $15—2. Elias Ireland, "Alexander." $10—3. Abram Butler, Wayne co., "Young Mogadore," Youatt.

Three years old.—1. Simon Schermerhorn, Rotterdam, "Waxy," $10—2. Samuel R. Garrett, Ballston, "Highlander," $5—3. Henry Bailey, Bethlehem, "Sampson," Youatt—4. Daniel Davis, Guilderland, "Rough and Ready," Trans.

Three years old Mares.—Harman Becker, Easton, "Lady Jane," $10.

Two years old.—Hiram Hall, Grafton, "Empire," $8.

Ponies.—Four imported ponies, very finely trained, were exhibited by the sons of E. P. Prentice, Mount Hope, and J.H. Prentice, New-York. They were exercised by the lads with great skill and judgment, and the committee recommend a Diploma to each.

GELDINGS AND MATCHED HORSES.

Geldings—1. Arden Merrill, Rome, gray geld., Diploma—2. Peter M. Moriarty, Saratoga Springs, gray, 6 years, Youatt.

Matched Horses.—1. Herod Otis, Jordan, Onondaga co., bays, 7 years, $8 and Diploma—2. Aaron Freeman, Milton, Saratoga co., browns, 5 and 6 years old, $5—Caleb Gasper, Onondaga co., dark gray, 4 years old, Vol. Trans.—N. W. Moore, Sauquoit, Oneida, black, 5 years old, Trans.—Lewis G. Morris, Morrisiana. Westchester co., bays, 5 and 6, Trans.—D. R. McCarthy, New Baltimore, grays, 6 years old, Trans.—Lester Hungerford, Watertown, Jefferson co., brown, 4 years old, Trans.—Henry Vail, Troy, sorrels, 7 years old, Eclipse horses, Trans.

SHEEP.—Class I.—Long Wooled.

Best Buck.—1. L. J. Van Alstyne, Canajoharie, $10—2. E. H Ireland, Watervliet, $5.

Best 5 Ewes.—1. Wm. Rathbone, jr., Springfield, $10.

Class II.—Middle Wooled.

Bucks.—Z. B. Wakeman, Herkimer, $10—2. J. McD. McIntyre, $5—3. Z. B Wakeman, Am. Shep.

Best Ewes.—1. Z. B. Wakeman, $10—2. do. $5—3. J. McD. Mc Intyre, Am. Shep.

Best 5 Lambs.—1. Z. B. Wakeman, $5.

Class III.—Merinos and their Grades.

Best Bucks.—1. Joseph Blakeslee, Salem Centre, Westchester co., $10—2. John B. Holmes, Saratoga, $5—3. Daniel S. Curtis, Canaan, Columbia co., Am. Shep.

Best Ewes.—1. Joseph Blakeslee, $10—2. D. S. Curtis, $5.

Class IV.—Saxons and their Grades.

Best Bucks.—2. Joseph Haswell, Hoosick, Rensselaer co., $5—2. W. Joslyn, Buskirk's Bridge, Rensselaer co., $5—3. Hiram Whitlock, North Salem, Westchester co., Am. Shep.

Best Ewes.—2. Wm. Joslyn, $5—2. J. L. Randall and Sylvester Milliman, Clay, Onondaga co., $5—3. Joseph Haswell, Am. Shep.

SWINE.

Large Breed.—Best Boar, 2 years old, Henry Holmes, Saratoga, $10—Best 1 year old boar, Berkshire, Jonathan Pitney, Saratoga Springs, $8—Best boar, 6 months and over, Jonathan Pitney, $5.

Best sow, 2 years old, Z. B. Wakeman, Herkimer, $10—Best sow, 1 year old, Berkshire, James Stewart, Saratoga Springs, $8.

Small Breed.—Best sow, 2 years old, James Stewart, $10—Best sow, 1 year old, Jonathan Pitney, $8—Best lot of pigs, Jonathan Pitney, $5—Second best, Nathaniel Mann, Milton, Saratoga co., Trans.

POULTRY.

Best lot of Dorking fowls, H. Vail, Troy, $2 and Am. Poulterer—Best lot of large fowls, J. T. Blanchard, Saratoga Springs, $2 and do.—Best pair of ducks, $2 and do.—Lot of Poland fowls, $2 and do.—Best and greatest variety of barnyard fowls, J. A. Brackett, $5 and do.

FOREIGN STOCK.

Horses—*Best Stallions.*—1. D. & N. Hill, Bridport, Vt., Black Hawk," $15—2. Silas Hale, Royalton, Mass., Green Mountain Morgan, $10—3. Spencer C. Smith, Bloomsbury, N. J., "Top-Gallant, jr." Youatt.

Brood Mares.—1. E. H. Morgan, Rutland, Vt., $15—2. Calvin Blodgett, "Lady Burbank," $10—3. F. A. Wier, Walpole, "Lady Wildair," Youatt.

Cattle.—A. H. Jerome, New Hartford, Conn., best yoke working oxen, Diploma.

Sheep—Cotswold.—C. W. Reybold, Delaware, Diploma. Saxons—S. C. Scoville, Salisbury, Conn., Diploma. Merinos—Joseph Hinds, Brandon, Vt., Diploma—J. N. Sawyer, Salisbury, N. H., 5 bucks and 5 ewes, Diploma—Jacob N. Blakesly, Conn., 1 buck, Diploma.

PLOWS.—Minor Horton & Co., Peekskill, Peekskill Plow, $10 and Diploma.

Farm Implements, Wagons, Harrows, &c.—1. Silas Briggs, Ballston, lumber wagon, $10 and Diploma—2. Hollister, with 3 pair steel springs, Col. Tour.—3. John W. Sherman, market and spring wagon, new and ingenious construction, Trans.

Harrows.—Z. B Wakeman, Herkimer, $3.

Cultivators and Scarifiers.—Anthony Van Bergen, Coxsackie, $3

Fanning Mill.—1. I. T. Grant, improvement on former mill exhibited. Silver Medal—2. J. E. Clapper, Trans.

Horse Power.—M. S. V. D. Cook, Pittstown, $5 and Diploma—2. A. & W. C. Wheeler, Chatham 4 corners, Trans.

Stalk and Straw Cutter.—1. Geo. Catchpole, $5 and Diploma—2. Byron Densmore, Trans.

Drill Barrows and Seed Planter.—H. L. Emery, Albany, $3—Pennock's Seed and Grain Planter, certificate—C. Masten, Patent Lever Drill and Grain and Seed Planter, Diploma and Trans.

Portable Grain Mills.—Chas. Ross, "Fitzgerald's Burr-stone," Trans.

Smut Machine.—Leonard Smith, Troy, Trans.

Broadcast Sowing Machine.—Peter Gleason, Trans.

Corn Sheller and Separator.—Luther Tucker, Trans.

Root Cutter.—Luther Tucker, "Ruggles, Nourse & Mason's vegetable root cutter," Trans.

Hay Fork.—L. Bacheller & Son, a very highly finished hay fork, Trans.

Mowing Machine.—F. Ketchum, Buffalo, Diploma.

Reaping Machine.—T. R. Hussey. Diploma.

Field Cultivator.—1. Doras Hinkston, South Barre, Orleans co., Diploma—2. Nathan Ide. Shelby, do., Trans.—3. Alanson T. Odell, Royalton, Niagara co., Trans

Seed Sower and Weeder.—Exhibited by Noadiah Moore, Chazy, N. Y., Diploma.

Corn and Cob Crushers.—Butterfield & Greenman, Utica, $5 and Diploma.

Flax and Hemp Dresser.—James Anderson, Louisville, Ky., $5 and Diploma.

Ox Cart.—G. B. Powell, Saratoga, $5.

Horse Rake.—Henry Warren, Troy, $5 and Diploma.

Ox Yoke.—1. Azor Monroe, Galway, Saratoga co., Diploma—2. Elon Sheldon, Sennett, Cayuga co., Trans.

Saddle.—Lyman J. Lloyd, Albany, Diploma.

Grain Cradles.—Myers & Bryan, Schaghticoke, Diploma—I. T. Grant & Co., do. Diploma.

Six Manure Forks.—Luther Tucker, (Partridge's) Diploma.

Six Hand Rakes.—Luther Tucker, "Mayher & Co., N. Y.," Diploma.

Grass Scythes.—Hiram C. White, Albion, Orleans co., made by R. B. Dunn, Wayne co., Maine, Diploma—Six cradle scythes, Knickerbacker & Hurlbut, Saratoga Springs, Diploma.

Churn.—Nathan Parish, Rush, Monroe co., Diploma.

Portable Grain Mill and Bolter.—Charles Ross & Co., Broadway, N. Y., Diploma.—D. C. Duncomb, Rochester, Bradfield's patent bolter, Diploma.

Corn Cutter.—Seth Whalen, West Milton, Saratoga co., Diploma.

Dog Power and Churn.—Allen Burdick, Moreau, Saratoga co., Diploma.

Two Hay Forks.—Deming & Hart, Farmington, Conn., of excellent workmanship and finish, Diploma.

Butter Firkins.—John Holbert, Chemung, Diploma.—Wm. Trap, r., Ithaca, Diploma.

Cheese Press.—T Burch & Co., Little Falls, (Kendall's patent,) certificate.

Best collection of Agricultural Implements.—Luther Tucker, $10 and Diploma.

PLOWING MATCH.

1. Flavel Shattuck, Galway, $15—2. John Smylie, West Galway, $12—3 James McDougall, Argyle, Washington co., $10—4. Howard Delano, Mottville, Col. Tour.—5. John Newland, Wilton, Saratoga co., Trans.—G. W. J. Bronson, Amsterdam, (special) Col. Tour.

Boy 18 years old.—George Wesley Steves, Milton, Saratoga co., $10.

DAIRIES.

Butter.—O. C. Crocker, Union, Broome co., for best lot in 30 days, 242 lbs. from 5 cows, from 13th June, $25—E. R. Evans, Marcy, Oneida co., for 2d best lot in 30 days, 216 lbs., from 11th August, $15—John Holbert, Chemung, for best 25 lbs made in June, $10—O. C. Crocker, Union, 2d best, Col. Tour.—Hamilton Morrison, Montgomery Orange co., 3d best, Vol. Trans.—B. A. Hall, New Lebanon, for best 50 lbs., made at any time, $15—O.C. Crocker, for 2d best, $10—Stephen C. Hays, Galway, Saratoga co., 3d best, Col. Tour—John Holbert, Chemung, 4th best, Silver Medal.

CHEESE.—Wm Keese, Ausable, Clinton co., for best 100 lbs., 1 year old and over, $15—T. Burch, Little Falls, Herkimer co., 2d best, $10—T. Burch, for best 100 lbs. less than 1 year old, $15—Wm Keese, 2d best, $10—Henry Lincoln, Greenfield, Saratoga co., Silver Medal—Newberry Bronson, Wyoming, 4th best, Wash Letters—Wm. Angles, Cobleskill, 5th best, Vol. Trans

SUGAR.—H. Davenport, Copenhagen, for best 25 lbs. maple sugar, $10.

SILK.—Mrs. Lewis Westcott, Greenfield, Saratoga co., for best cocoons and silk sewings, $10—Mrs. S. J. Pierce, Burlington, Vt., for two white handkerchiefs and black long shawl, Diploma and Downing.

DOMESTIC MANUFACTURES.

George W. Henry, Martinsburg, Lewis co, for best woolen blanket, very superior, $5—Albert L. White, Rutland, Jefferson co., 2d best, $4—Mrs. B. R. Voorhees, Amsterdam, 3d best, $3—Wm. Wilson, West Milton, 4th best, Trans.—Seth Whalen, 5th best, Trans.—George W. Henry, Martinsburg, Lewis co, for best 10 yards flannel, $5—Mrs. L. D. Scoville, Monroe co., 2d best, $4—Wm. Dunning, Greenfield, Saratoga co., 3d best, $3—Nelson P. Jordan, Malta, for best 10 yards woolen cloth $5—Mrs. B. R. Vorhees, Amsterdam, for best woolen carpet, $5—Stephen C. Hays, Galway, Saratoga co., 2d best, $4—Mrs. L. D. Scoville, Monroe co, 3d best, $3—Mrs. Benj. Russell, Saratoga co., for best hearth rug, $5—Joseph Wood, Greenfield, Saratoga co., 2d best, $4—Mrs. L. D. Scoville, Monroe co., 3d best, $3—P. R. Waterbury, Saratoga Springs, 4th best, $2—B. A. Hall, 5th best, Trans.—Mrs. Joseph Daniels, Greenfield, for best 10 yards linen cloth, $5—Mrs. Jane Harrell, Rensselaer co. 2d best, $4—Mrs. L. D. Scoville, Monroe co., linen diaper $5—Ezra Westcot, Milton, Saratoga co, kersey, $3.

Rag Carpet.—1. Jacob Ambler, Saratoga Springs, $3—2. J. Moulton, West Troy, $2—3. Mrs William Newcomb, Pittstown, Trans.

Carpet Coverlit (double.)—1. C. R. Nichols, Darien, Genesee co., $4—2. Joshua Bliven, Saratoga Springs, $3—3. Miss Delia A. Jones, Westmoreland, Oneida co., $2—4. Joseph Wood, Greenfield, Trans.

Linen Stockings.—1. Mrs. B. R. Voorhees, Amsterdam, $2—2. Mrs. Felix Thomas, Trans.

Woolen Knit Stockings.—1. Mrs. B. R. Voorhees, $2—2. —— Haskins, Stillwater, Trans.—3. Wm Dunning, Greenfield. Trans.—4. Mrs. Esther Root, Saratoga Springs, (87 years of age,) $2 and Diploma.

Diplomas were awarded to Utica Mills for 6 pieces superfine broadcloth, (W. C. Churchell.)

Seneca woolen mills; 4 pieces of cassimere,(Wm. Langworthy, agent.)

Palmer & Co., N. Y., handsome specimens tapestry.

Timothy Bailey, Cohoes, very fine specimens of drawers and wrappers.

Scofield. Capron & Co., Walden, Orange co., two pieces superfine broadcloth from American wool.

Wool-grower's Manufacturing Company of Little Falls, M. W. Priest, agent, two pieces broadcloth, made from native wool.

NEEDLE, SHELL, AND WAX WORK.

Embroidery.—Miss Caroline Pierrepont, Troy, $3 and Silver Medal—2. Miss Olivia Slocum, Troy, $3—James R. Westcott, Sar. Springs, fire screen, $2—Charles Damarest, Rochester, bed quilt, $2—Miss Rebecca W. Alleyn, Rochester, piano cover, $2—Mrs. Polly B. Westcott, of Greenfield, for two quilts, silk bead purse, and other articles, $3—Mrs. Wm. Dunning, of Greenfield, for linen table cloth and other articles, $2—Miss Helen Hodgeboom, Schodack, ottoman covers, $1—Mrs. B. R. Voorhees, Amsterdam, for a ingeniously wrought vest, from the listing of premium cloth presented Henry Clay, $1—To the same, for a large variety of articles of her own ingenuity and industry, $10 and Silver Medal—Mrs. James M. Andrews, Sar. Springs, for a boy's coat, $1—Mrs. D. Shepherd, Sar. Springs, for an infant's blanket, $1—Miss Amanda Ensign, Sar. Springs, watch case, $1—Miss Sarah M. Davison, Sar. Springs, worsted work, $1

Quilts.—1. Mrs. John Cramer, 2d, Waterford, worked quilt, $2—2. Miss Nancy A. Gregg, Waterford, worked quilt, $1.

Rundell and Leonard, Troy, specimen of needle work, and best made shirts, $5—Miss Jasena Bronson, Amsterdam, port-folio and table cover, $2—Mrs. Sarah Churchill, New Lebanon, veil, $1—Mrs. Wasson, (77 years of age) counterpane, $2—Harvey Davis, child's knit coat, made by his daughter, $1—A. A. Lansingh, Albany, shirts, &c., $2—Miss Gould, Moreau, embroidery, $1—Miss Eliza Benedict, Ballston, fancy bed quilt, $2—Miss Leggett, Sar., swansdown muff and tippett, $1—Miss Frances Ann Green, Mayfield, Fulton co., shell work box, $3—Miss Harriet Berry, Sar. Springs, cotton knit table spread, $2—Mrs. Eliza Whitford, Sar., embroidered lace veil, $2—Mrs. Washington Putnam, Sar. Springs, specimen needle work, $2—Miss C. A. Waterbury, Sar. Springs, embroidered hearth rug, $2—Mrs. Wm. Hill, album quilt, $1.

FLOWERS.

Professional List.—Greatest variety, James Wilson, of Albany $5—Greatest variety dahlias, James Wilson, $5—Best 24 dahlias, James Wilson, $3—Greatest variety of roses, James Wilson, $5—Best 24 blooms, Thos Ingram. $3—Greatest variety of verbenas, James Wilson, $3—Best 12 varieties of verbenas, Thos. Ingram, $2—Greatest variety German asters, Wm. Newcomb, $3—Greatest variety pansies, James Wilson, $3—Best 24 blooms, Thomas Ingram, $2.

Amateur List.—Greatest variety, Mrs. Washington Putnam, Silver Medal—Greatest variety dahlias, Wm. Newcomb, Silver Medal—Best 12 blooms, Miss E. Clarke, Sar. Springs, Horticulturist—Greatest variety roses, Mrs. E. C. Delavan, Ballston, Silver Medal—Best 6 phloxes, Dr. Herman Wendell, Albany, Horticulturist—Best Seedling phloxes, Dr. Herman Wendell, Wash. Letters—Best 12 verbenas, Dr Herman Wendell, Horticulturist—Best 12 Seedlings, Dr. Herman Wendell, Horticulturist—Greatest variety German asters, Mrs. Newcomb, Horticulturist—Greatest variety pansies, Mrs. Truman Mabbitt, Halfmoon, Horticulturist.

General List.—Best collection greenhouse plants, Mrs. J. Ford, Sar. Springs, Silver Medal—Best floral design, J. Dingwall, Albany, Silver Medal—Best ornament, Mrs. T. Mabbett, Silver Medal—2d best, James Wilson, Albany, Col. Tour—3d best, Mathias Tillman, (gardener to Dr. Wendell.) Horticulturist—Best flat hand bouquet, James Wilson, Albany, Horticulturist—2d best, T. Ingram, Sar. Springs, Wash. Letters—3d best, Miss Sarah M. Davison, Sar. Springs, Downing—Best round bouquet, James Wilson, Albany, Horticulturist—2d best, T. Ingram, Sar. Springs, Downing—3d best, Mrs. Dr. J. Clarke, Sar. Springs, Downing.

FRUIT.

Apples.—E. C. Frost, Catharine, Chemung co., for Dowse apple for cooking and winter use, worthy of further attention; Holland pippin variety of fall apples; Riley apple, of the fall pippin variety, worthy of note—requested for future exhibition, Diploma—Wilson, Thorburn & Teller, 18 varieties, (9 approved)—Truman Mabbett, 4 varieties early apples—"Early Harvest," "Yellow Bough," "Strawberry," Downing—H. N. Langworthy, per J. Alleyn, 4 varieties—Henry Vail, Troy, 27 varieties, 23 approved: 2d premium, $5 and Downing—J. W. P. Allen, Oswego, 5 varieties, all approved, Downing—J. L. Randall, Lysander, 31 varieties 19 approved, Downing.

Pears.—1. C. Reagles & Son, Schenectady, largest and best variety, Downing, colored plates—2. Dr. H. Wendall, $5 and Down ing—3. Wilson, Thorburn & Teller, Trans.—Best collection autumn pears, J. W. P. Allen, Oswego, $5 and Downing—J. W. P. Allen exhibited a remarkably fine specimen of a limb of Oswego Beurre, loaded with fruit, styled by the committee "Seedling No. 1."—commended to special notice, and to which they award a Diploma—Prof. Ives, New Haven, Conn., presented a small seedling early autumn pear of high flavor, Downing—L. Prevost, Astoria Nursery, for a splendid specimen of Duchess d'Angouleme, grown on quince stock, Diploma—Isaac Rapalje, Astoria, presented fine specimens of the Rapalje Seedling, a new pear, which on the sea coast may prove a substitute for the White Doyenne, Downing—H. N. Langworthy, by J. Alleyn, of Rochester, fine specimens of Onondaga pears, Diploma.

Peaches.—Best 12, A. Snyder, Kinderhook, $2 and Downing—2d 12, Enoch H. Rosekrans, Glens Falls, Downing—Best Seedling variety, Oliver Phelps, Canandaigua, large yellow cling, $3 and Downing—James Mills, Poughkeepsie, beautiful specimen pine apple cling, extraordinary size and flavor, Diploma—Prof. A. H. Stevens, N. Y., presented several large and beautiful specimens of the N. Y. white cling stone, grown in his garden at Astoria, Downing—Jerry Wariner, Springfield, Mass., fine specimen Seedling peaches, from a tree 3 years old, by J. Stafford, Diploma—E. P. Prentice, Mt. Hope, 12 fine specimens of Bergen's yellow, Diploma—H. N. Langworthy, by J. Alleyn, Rochester, fine specimens of Royal Kensington and yellow melacoton, Diploma.

PLUMS—*Best collection.*—1. S. C. Groot, Schenectady, 25 varieties. $5 and Downing—2. H. Wendell, Albany, 20 varieties, $5 and Downing.

Best six varieties.—1. S. C. Groot, $3 and Thomas' Fruit Cult.—2. Dr. Wendell, $1 and Thomas' Fruit Cult.—Abel Whipple, Lansingburgh, for best Seedling, known as Locofoco, $5 and Downing—S. C. Groot, for best 12 plums, $1 and Thomas' Fruit Cult.

NECTARINES AND APRICOTS—*Best and greatest variety.*—1. H. Snyder, Kinderhook, $3 and Downing—2. Dr. Wendell, $2 and Thomas' Fruit Cult.—Col. Young, of Ballston, presented some specimens of nectarines produced from the peach stone.

Quinces.—1. Best 12 of any variety, Dr. R. T. Underhill, Croton Point, $3 and Downing—2. Robert McDonnell, Greenfield, Saratoga county, $2 and Downing.

Grapes.—1. Best and most extensive collection of native, Daniel Ayres, Amsterdam, $5 and Downing—2. J. C. Hubbell, Chazy, Clinton co., $2 and Downing—1. Best dish of native, R. T. Underhill, Croton Point, Thomas' Fruit Cult. and Diploma—2. Wm. C. Sage, foreign and native, Downing—Col. Thomas H. Perkins, of Boston, sent a box containing bunches of eight varieties of foreign grapes, extraordinary fine specimens, grown under glass in his garden at Brighton—sorts, Nice, two varieties, St. Peters, Black Hamburgh, White Frontignac, West St. Peters, Grizly Frontignan. White Muscat, Muscat of Alexandria; also some beautiful Nectarines of remarkable flavor and growth, produced under glass, Boston, Red Roman, and Norrington, Diploma and a letter of thanks.

Special commendation to Mrs. Voorhees, of Amsterdam, for a bottle of choice gooseberry wine, of her own manufacture.

To John H. Waring, for best peck cranberries, (superior specimen.) $5.

VEGETABLES.—To N. H. Waterbury, Sar. Springs, for 12 best ears seed corn, $1—1. Best ½ peck table potatoes, C. R. Nichols, Darien, Genesee co., $1—2. H. Morrison, Montgomery, Orange co., $1—Greatest and best variety of Seedling potatoes, Rev. N. S. Smith, Buffalo, (30 varieties,) $10—Thomas Cody, Saratoga Springs, for 3 best heads of cabbage, $1—N. H. Waterbury, for best 12 carrots, $1—N H. Waterbury, for best 3 squashes, $1—Truman Mabbett, for best 12 tomatoes, $1—Thomas Cody, for best 3 egg plants, $1—C. Schuyler, Ballston Spa, 2d best 12 ears seed corn, Trans.—C. Schuyler, for 12 best onions, $1—A. J. Parker, Sar. Springs, for Lima beans, $1.

PAINTINGS AND DRAWINGS.—Wm. E. McMaster, New-York, "May Queen," $5 and Diploma—No 335. Landscape, water colors. $5—Ambrose Stevens, animal portraits, horse and cow, $10 and Diploma—Miss A. M. Hill, Canton Village, Onondaga co., drawing in pencil, $5—Miss Martha Wheeler, Sar. Springs, drawing, $5—The committee noticed with approbation several portraits by N. Cook, of Sar. Springs, among which were excellent likenesses of Judge Willard, Judge Marvin, and O. M. Coleman.

STOVES—*For Wood fire.*—1. Theophilus Smith, Galway, "American Reverse draft," Diploma—2. Elisha Walter, Syracuse, "Rough and Ready," Silver Medal.

For Coal fire.—1. ——— Wilson, Mechanicsville, Diploma—2. Anthony Davy & Co., Troy, "Washington air tight," Silver Medal.

Parlor Stoves.—1. A. T. Dunham, West Troy, "Trojan parlor stoves," Diploma—2. Vail & Warren, "Sar. air tight," Silver Medal—Anthony Davy & Co., Troy, for Summer baker, Diploma—L. Morse, Athol. Mass., stove for burning sawdust, &c., Trans—Buck's patent hot air cooking stove was exhibited, and entitled to commendation heretofore given.

DISCRETIONARY PREMIUMS.

[The Committee on Discretionary Premiums reported only in part. and intend to submit an additional report to the Executive Committee of the State Society.]

C. N. Bement. Albany. osier willow, $5.

Mathias P. Coons, Lansingburgh, for six specimens hurdle fence, Silver Medal.

J. L. Gatchel, Elkton, Maryland, for hydraulic ram, Gold Medal.

W. Wheeler. Rockford, Illinois, for "Chandler's morticing and tenoning machine," $5.

Beautiful models of Bee Hives, exhibited by Oliver Reynolds, Monroe co.

Joseph C. Rich, Penfield, Monroe co., Washing Machine, Trans.

Gustavus White, Middle Centre, Otsego co., Potato Washer, Trans.

S. Morrison, Granville, Spinning Wheel and Reel, Trans.

J. Ball & Co., indestructible water pipe, Diploma.

Henry Brackett, Wilton, Saratoga co., well curb, Trans.

L. G. Hoffman, Albany, Egg Hatching Machine, in operation on the ground, Diploma.

R. Pomeroy, Pittsfield, Mass., for improved mail axles, Silver Medal.

Augustus Thayer, for combination pump, Silver Medal.

James N. Kelley, Rochester, cigars and tobacco, Silver Medal and Diploma.

John Lock, 31 Ann st., N. Y., shower bath, Silver Medal.

Lewis E. Close, of Saratoga Springs, a lad of 12 years of age, for a handsome and ingenious small bedstead, manufactured by himself, Silver Medal. The committee give this premium with much pleasure, to encourage industry and ingenuity in youth.

Thomas Peck, improved door spring, Silver Medal.

Wm. Bushnell, Rochester, case surgical instruments, fine finish, Silver Medal.

J. Orville Olds, deaf and dumb Institute, N. Y., elements of chirography, Wash. Letters.

A. Meneely, West Troy, three church bells, Certificate.

Alfred Cross, Saratoga Springs, dress coat, pantaloons and vest, Wash. Letters.

Thomas Davies, Utica, miniature steamboat, in operation at Fair—a very ingenious and beautiful article, Wash. Letters.

Diplomas were awarded to L. J. Lloyd, Albany, for one set double and one single harness, and one Russet leather travelling trunk; R. T. Norgrove, Albany, for elegantly wrought carpet bags and satchels, saddle and trunk; James Henry, jr., an educational chart; F. P. Burns, Albany, piano; James Goold & Co., Albany, sleigh and wagon; W. W. Bryan & Co., Rochester, cooper's tools; William Trapp, jr., Ithaca, stave and barrel machine; Rogers and Oakley, Albany, water proof cloth; Leonard & Bunker, Troy, a Prince Albert buggy, very neat workmanship; Albany Argillo Works, glass ware and argillo door knobs, very superior; Francis C. Young, Painted Post, Steuben co., Munsell's patent boring machine for wagon hubs; Cornelius Oakley, N. Y., for pure Turkey tobacco of the kind used in Turkey for smoking; W. Haworth, N. Y., collar stuffing and shaping machine; F. W. Wood, 67 Frankfort st., N. Y., and 173 River st., Troy, for superior leather beltings; W. S. Segare, Utica, window springs; David Mundell, 116 Fulton st., Brooklyn, pair gentleman's boots; Mrs. G. Anderson, Broadway, Albany, a splendid assortment of confectionary and cake; Edward Owens, Albany, surgical and dentist's instruments, and other articles, very superior; Philander Salmon, Reading, Conn., Wood's patent shingle machine; Parker & Cooke, Albany, exhibited a suit of clothes of most excellent workmanship and finish; Benjamin Bruff, Rochester, model sash fastener, a very useful invention; Troy Rolling Mill Co., railroad iron; L. E. Field, Moscow, Livingston co., metallic spoke suspension carriage wheel; B. W. Franklin, Little Falls, gold pens; Frothingham & Co., Albany, hats, caps, &c.; Flagler, Baker & Co., for portable forge and bellows.

Vols. of Transactions of the Society, were awarded to John Hemstead, Sandy Hill, blacksmith's vice; James Wilkinson, Saratoga co., harness, stirrups, &c.; Barton & Fenn, Troy, fancy soaps; Connolly & McCormick, Sar. Springs, pair boots; Whipple & Co., Sar. Springs, grave stone; John Hodgman, Sar. Springs, screw plate; Nathan Bixley, New York, gum elastic maps, &c.; H. P. Hall, Sar. Springs, Daguerreotype; Cromwell & Co., Mechanicsville, crockery; Isaac Spalding. Sar. Springs, bass viol; J. H. Welcome, New York, Diamond cement; Thompson & Howland, Cayuga co., barrel of Cayuga plaster; John Harrison, Stillwater, doorknobs, &c.; T. Lawrence. Sar. Springs, garden and fire engine; Wm. Platt, Waterford, universal chuck; Dr. E. Platt, New York, patent metallic india rubber valve, breast pump, &c.; S. Benson. apple paring machine; Anable & Smith, Albany, superior leather; Thomas Ling, Saratoga, fire engine.

Commended.—A lot of Military Trimmings, very beautifully got up, and are worthy of commendation for their execution, L. T. Boland & Co., Albany.

Some beautifully sawed lumber, exhibited by Mr. Freeman.

A splendid carriage and harness were exhibited by Le Grand Smith, of Albany, much admired.

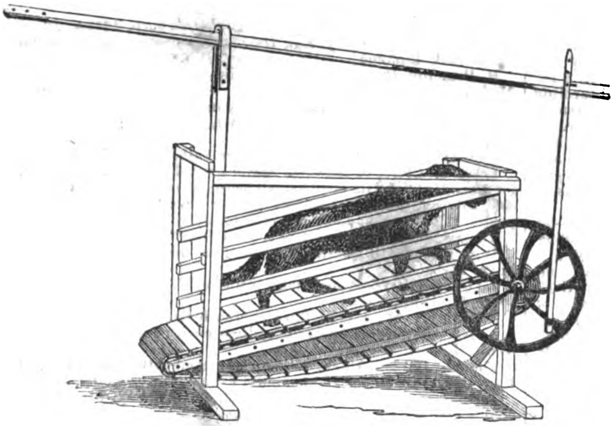
John Williams, of Rochester, exhibited two barrels flour of the well known and highly prized Whitney brand, remarkably good.

Whitney Putnam, Rochester, 1 barrel flour from the city mills, very good.

CORRECTION.—In the awards on cattle, Class I, it is said that Mr. VAIL's bull "Meteor," received a "certificate." This was not correct; and we quote from the Report of the Committee, what they did say of "Meteor," which was as follows:

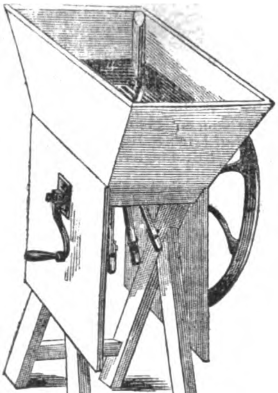
"The committee would mention here, as coming in this class, the justly celebrated Bull "Meteor," belonging to Mr. GEORGE VAIL, of Troy, which was on the ground for exhibition, only. He having taken the 1st premium at a former fair, was excluded from competing at the present. We think he stands unrivalled."

SLOBBERS IN HORSES, it is said, may be immediately cured by causing the animal affected to eat *burdock leaves*. Horses will eat them when it is bad. Some of our farmers always keep this medicine in wholesale quantities, and perfectly fresh for use.



Dog Power.—Fig. 77.

The above cut represents a machine or power to be propelled by a dog, sheep, or other small animal, for the purpose of churning, working a washing-machine, turning a grind stone, or working small mills of any kind. It is a very simple and complete apparatus, and would be found profitable on many farms, or in many other situations. It was invented by **Palmer & Frost**, of Poughkeepsie, N. Y., and is sold at $15.



Root Cutter.—Fig. 78.

The above is a representation of **Palmer & Frost's** Root Cutter. The knives are attached to the ends of arms which are fastened to a shaft, and play through the hopper containing the vegetables, cutting them into pieces about two inches long, and a third of an inch wide. The knives are so arranged that but one strikes at once, and are so placed round the shaft that they form a circle. The price of this machine is $12.

SUBSOIL PLOWING.

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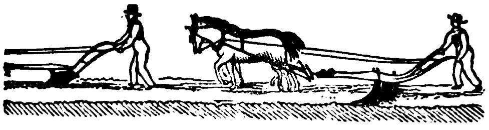
We have often expressed the belief that the practice of subsoil plowing would be attended with great advantages in many situations in this country. In England it is becoming more and more adopted, and we can see no reason why its use should not be attended with equal benefits here. The cut at the head of this article, illustrates the manner in which this operation is performed. A team drawing the subsoil plow, follows in the furrow made by a common plow. It is proper to observe, that for subsoil plowing to produce the greatest benefits on wet, tenacious soils, they should be first under-drained.



Subsoil Plowing.—Fig. 79.

The Journal of the Transactions of the Highland Agricultural Society of Scotland, for January, 1847, contains an account of some very valuable experiments in regard to subsoil plowing, furnished by Mr. J. **Wilson**. It is stated that the farm on which these experiments were made, had been under cultivation for a long period; that it consists of various kinds of soil—from a gravelly earth to a tenacious clay. The usual depth of plowing for many years had been from five to six inches, and a hard crust had been formed at that depth.

The field first experimented on, contained thirteen acres, most of the soil being heavy, inclining to clay, on a clay subsoil, and the rest light soil, on a gravelly subsoil. It was under-drained in 1843, with tile, at the distance of fifteen feet between the drains. Previous to draining it had been very wet, and the crops it bore were generally poor. It was subsoiled in the fall of 1844, the plow going across the drains. A common two-horse plow was first used, taking a depth of six to seven inches, and a subsoil plow with two horses followed, taking an additional depth of seven to eight inches. Eleven acres were plowed in this manner, and two acres were left, which were only plowed to the ordinary depth of six and a half inches. The whole field was manured alike—the manure being from yard dung and guano—and it was sowed to yellow turneps in the fore part of June. No difference was discernible in the crop till about the first of August, when the subsoiled portion showed a decided superiority, which became more and more apparent till the crop was taken up the last of October. The subsoiled portion gave 26 tons 7 cwt. per acre, and the part not subsoiled, 20 tons 7 cwt. per acre—making a difference in favor of subsoiling of 6 tons 7 cwt., or a value of £3 18s. per acre.

The next experiment was upon a field which had been furrow-drained with tiles in the autumn of 1844; the soil rather inclined to sand on a subsoil of sandy clay. Two acres were subsoil plowed to the depth of fifteen inches in December, 1845, and two acres were only plowed to the depth of six or seven inches. Two ridges of the field were *trench-plowed* to the depth of thirteen inches. [Trench plowing is performed by running a plow of the common construction in the furrow of another of the same kind. Its operation and effects are different from those of the subsoil plow, as the surface soil is covered by the earth taken up from below by the second plow.] The field was manured alike with manure from the farm-yard, and planted to potatoes. The trench plowed part gave 7 tons, 1 cwt., 2 quarters, per acre; the subsoiled, 7 tons, 9 cwt., 2 quarters; and the part only plowed, 6 tons, 14 cwt., 1 quarter, per acre—making a difference of 15 cwt., 1 quarter per acre, in favor of subsoiling, over the part plowed only in the ordinary way; and a difference of 8 cwt. over trench plowing.

The next experiment was made on a field which had been partially drained several years since. The soil "an earthy loam incumbent on clay." A portion of the field was subsoiled, and the remainder plowed to the ordinary depth. The field was sown to barley in

1846. The appearance of the crop was most favorable on the subsoiled portion during the time it was growing, and when threshed, gave the following results:—The subsoiled portion yielded 8 quarters, 3 bushels, per acre, with 36¼ cwt. of straw; the part not subsoiled, yielded 7 quarters, 4 bushels, 3 pecks, per acre, with 28 cwt. of straw—making a difference in favor of subsoiling of 6 bushels, 1 peck of grain, and 8¼ cwt. of straw per acre.

ICE-HOUSES.

Few persons who have ever known the advantages which ice affords during the warm season, would be willing to forgo the use of the article. It was formerly regarded as a luxury which the rich only could enjoy, but, fortunately, it is now afforded at so cheap a rate as to be within the reach of all. In cities it may readily be obtained from those who make a business of storing it for sale, and in the country each one may secure his own supply at a cheap rate. Every farmer, unless he has extraordinary advantages in regard to the use of cold spring water, and an airy, cold cellar, should have an ice-house. A reservoir formed by damming a small stream, such as almost every farm affords, will yield as much ice as will be wanted for the supply of a family. In general, however, there are ponds or streams within a few miles from which an abundant supply can be obtained.

It is now pretty well settled that ice-houses should be built chiefly or entirely above ground. Those which have generally been built by the great ice-dealers and exporters, have not been much sunk into the earth. It has been ascertained that the dampness of the ground operates against the preservation of the ice.

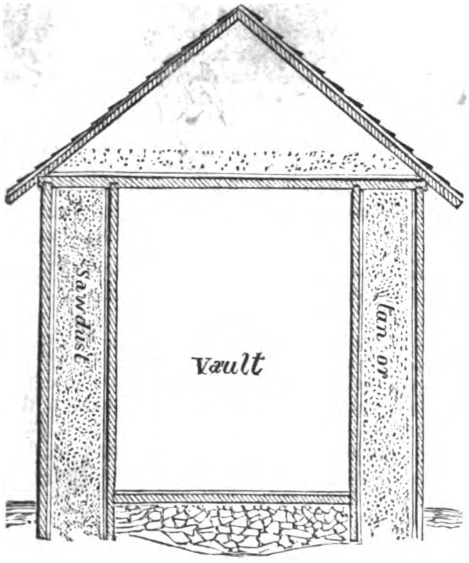


Fig. 80. *Section of the Ice-house above ground.*

Mr. Downing, in the first volume of the *Horticulturist*, gives an extract from a letter received from Mr. N. J. Wyeth, of Cambridge, Mass., a gentleman who has had much experience in the management of ice, and is largely concerned in its exportation. From Mr. W.'s letter, we take the following description of an ice-house above ground:

"An ice-house above ground should be built upon the plan of having a double partition, with the hollow space between filled with some non-conducting substance.

"In the first place, the frame of the sides should be formed of two ranges of upright *joists*, six by four inches; the lower ends of the joists should be put into the ground *without any sill*, which is apt to let air pass through. These two ranges of joists should be about two feet and one-half a part at the bottom, and two feet at the top. At the top these joists should be morticed into the cross-beams which are to support the upper floor. The joists in the two ranges should be placed each opposite another. They should then be lined or faced on one side, with rough boarding, which need not be very tight. This boarding should be nailed to those edges of the joists nearest each other, so that one range of joists shall be outside the building, and the other inside the ice-room or vault. (Fig. 81.)

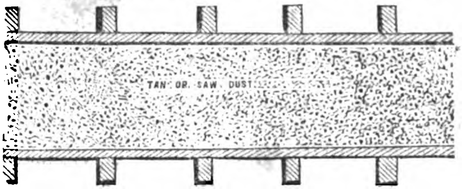


Fig. 81. *Manner of nailing the boards to the joists.*

"The space between these boardings or partitions should be filled with wet tan, or sawdust, whichever is cheapest or most easily obtained. The reason for using *wet* material for filling the space is, that during winter it freezes, and until it is again thawed, little or no ice will melt at the sides of the vault.

"The bottom of the ice vault should be filled about a foot deep with small blocks of wood; these are levelled and covered with wood shavings, over which a strong plank floor should be laid to receive the ice.

"Upon the beams above the vault, a pretty tight floor should also be laid, and this floor should be covered several inches deep with dry tan or sawdust. The roof of the ice-house should have considerable pitch, and the space between the upper floor and the roof should be ventilated by a lattice window at each gable end, or something equivalent, to pass out the warm air which will accumulate beneath the roof. A door must be provided in the side of the vault to fill and discharge it; but it should always be closed up higher than the ice, and when not in use should be kept closed altogether."

Action of White Lead with Oil.—Every one may have noticed that paint in which white lead is mixed, after it has been applied awhile, cracks, and scales off. This is explained by the fact that lead exerts a chemical action on oils, in consequence of which the oil, when in combination with the lead, continues to harden, until at last, under the various changes of the atmosphere, it becomes brittle, breaks into scales, and cleaves off. On account of this action, it is thought that no white lead should be put into what is called the "priming" coat, in painting buildings or articles which are not designed to be white. Black paint is more durable than white. This may have been noticed where, as on guide-boards, &c., black letters have been formed on a white ground. The black remains perfect long after the surrounding parts have mouldered away, leaving the letters standing in "relief." This is explained as follows: The black paint is made chiefly of lamp-black, which substance is nearly pure carbon, and is known to be one of the most imperishable substances in nature—that it is not changed by the vegetable in combination with which it is used as paint, in consequence of which the slightest film of the compound is a most durable protection against the destructive influences of the weather.

Crops in Illinois.—The crops in Bureau co., average the present season, 15 bushels per acre for wheat, 40 for corn, and 40 to 50 for oats.

THE FARMER'S NOTE BOOK.

Heating Houses by Hot Air Furnaces.—I saw in a late number of the *Cultivator*, a very interesting communication from Geo. Geddes, on the subject of warming houses, in which was illustrated most of the many superior advantages of the hot air furnace, when rightly constructed, which not only combines the advantages of the open fire place and the close stove, but greatly adds to the benefits of both, without partaking, in the least, of any of their evils. My object now is to tell *my* experience, which will verify all Mr. Geddes says in favor of his furnace, and perhaps suggest some new ideas that may be useful to our farming communities, who have heretofore seemed to think that such luxuries did not belong to them, or they would have enjoyed them long ago, if it were for no other reason than the saving of expense. My furnace is built very much like Mr. Geddes', only the stove is wholly within the vault, which has a shut iron door, such as is spoken of by him as an improvement; the vault is as small as is convenient for putting up the stove within it, being about one foot spare all around; the stove is four and a half feet long. twenty-two inches high, and fourteen inches wide. The hot air chimney, in which the smoke-pipe is enclosed, rises two and a half feet above the first floor, in one corner of the dining room, where there is an offset covered with a cast iron plate, with a boiler hole directly over an elbow in the smoke-pipe, which affords sufficient heat to boil water in a short time, in cold weather. The hot air chimney then continues two and a half feet above the second floor, where there is another offset, as before, in the parlor above, over another elbow in the smoke-pipe, which turns into the smoke chimney. There are nine rooms, five of which come in contact with the hot air chimney, in which there is an opening near the floor to each, so that the whole are sufficiently warmed, without pipes to convey the heat from the furnace below; the other rooms are bed rooms, and open into these five, and are sufficiently warmed, by leaving the door ajar, for all comfortable purposes—the hot air, being crowded into the main room, finds its way into the bed room sooner than it would if every crack and crevice in the bedroom, as well as the parlor, were called upon to furnish a supply of air for an ordinary fire place, or if the parlor was heated by a tight stove, which ensures no circulation of air at all.

The first cost of my whole apparatus, was much less than I could have prepared for heating five principal rooms, saying nothing about the saving of wood, which is considerable, the preparing it for small stoves, which is more, the time making fires, the room occupied by the stove and wood-box, the dirt which is unavoidably accumulated, and the blacking of stoves, &c., which are all minor considerations, when we speak of the health and comfort, afforded by a wholesome, comfortable, summer air, circulating through the whole house, both night and day, all winter; and, instead of feeling a draft of cold air, which is driven out through every crevice, by the hot air rising, and continually forcing its way into the room, from the furnace below. I have enjoyed these luxuries only three years past, and I consider I am fully recompensed for the loss of our former dwelling by fire, which required five stoves, and more expense for pipe alone, than the whole cost of our present heating apparatus, to render life any way tolerable, compared with the comforts of our furnace, in the winter season.

There have been numerous failures in the construction of hot air furnaces; they seldom have heating surface sufficient for the heat required, and generally have too much space in the vault around the stove. The heating surface should be so proportioned to the heat required, as not to require a red heat from every part. There is more or less vegetable matter floating in the atmosphere at all times, in the shape of dust, which, coming in contact with red hot iron, becomes charred or scorched, and rendered very unwholesome to breathe, which is the cause of the peculiar smell that arises from a red hot stove. If the space be too large about the stove, there is a loss of heat, occasioned by the circulation of air in the vault, before it is admitted into the room above; but if the space be so small, as to give a sufficient velocity to a constant current of air, in contact with the stove, more heat will be conveyed from the heated surface, which will be kept at a lower temperature, compared with the heat imparted, than when the space is larger. D. S. Howard. *Lyonsdale, 14th April*, 1847.

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Culture and preparation of Sumac.—I observe in the December number of the *Cultivator*, some remarks respecting sumac, which I am induced to notice, having while a resident in Montreal, and during the period that I filled the Vice chair of the Natural History Society in that city, been instrumental in causing a prize to be offered for an essay on the best mode of preparing that and many other articles suited to the arts. I regret to say the Society was unsuccessful in its object.

Sumac, strange to say, is imported from Sicily into the United States. In the price current, published in the *New-York Journal of Commerce*, of the 14th December, it is quoted—

Sumac......Sicily......Ton....$45 to $48.50
Do ....American.... " .... —— ——

This latter line looks as if no American was to be procured, although, as you perceive, the price, $2.25 per cwt., is nearly as high as the farmer gets for his wheat. Surely if it can be made at little expense, and in large quantities, it should not be so sadly neglected.

The mode of preparing sumac consists in cutting down the shrubs during winter, so as to have a thick under growth of young shoots; to cut these young shoots down in summer when in full vigor, to allow them to dry; and then to grind them in a bark mill. It is the bark and the young wood which form the drug, not the leaves.

The sumac thus imported into New York, is also imported from thence into Canada, for the use of the tanneries, although growing along side them. I was curious to know the peculiar properties of sumac as a tanning material, thus to be procured at a great cost and much trouble. I knew that it was used in Great Britain; but there of course all tanning materials are scarce. I found that, sumac renders hemlock-tanned leather as light in color as the oak-tanned, and what is more important, as impervious to water, and as durable. The leather is about four-fifths tanned with hemlock, and then finished with sumac.

Sumac can be employed as a yellow dye, but is fugitive, and but little in request, Quercitron bark being superior in every respect. Its chief importance, in addition to its use as a tanning material, being to prepare light skins, as morocco and the very finest calf skins. Its effect arises from the Gallic acid contracting the pores of the skin, thus rendering it hard and waterproof—it lightens the color of the hemlock-tanned leather from the usual effects of acids on coloring matters.

Sumac is also used in Britain as a dye for slates, and various neutral colors, especially by calico printers; also in dyeing black cloth to save galls, and to give a certain degree of softness to the shade—a slight tinge of yellow, in fact. It answers many of the purposes for which nut-galls are required.

An article that sells nearly at as high a price as wheat, at one-tenth the cost, deserves consideration. It might form an important export. The American Sumac, I am told, is inferior to the Sicilian—owing to its not being the right kind. Surely some seed could be easily procured through the U. S. consul at Palermo.

Madder, Weld, and Woad, ought also to be cultivated extensively on this Continent. The soil and climate are both fully as favorable as in the countries whence they are imported. Woad might be so prepared as to surpass the finest Indigo—indeed, a real Indigo of far finer color than any now to be procured, could be made from it. These are points deserving every attention. Zea. *Hamilton, Canada West, 24th December*, 1846.

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Preservation of Cabbages.—A correspondent in the May number of the Cultivator, inquires touching the best mode of preserving cabbages through the winter. I have a plan which ten years' experience has shown to be a very good one; but whether it is the best, or even a novel one, to most of your readers, I will not pretend to decide:—

I let my cabbage stand until late in the season, and (if I discover no symptoms of rot) until we have unmistakable signs of the appearance of winter. I choose the dryest part of my garden or field, and with spade or hoe dig holes in rows, say two feet apart, just large enough to receive about two-thirds of a cabbage head. I select one of the largest and most solid heads, pull it up by the roots, wrap it up in the large coarse leaves, that grow to the stalk, and *chuck* it into one of the holes, with the stump inclining upwards, at an angle of 45 degrees, or even placed vertically. Nothing now remains but to shovel on two or three inches of dirt, and press it down upon the head and around the stump, a few inches of which may be left above ground, to mark the spot, and serve as a handle to pull the cabbage up by. Treated in this way, I have found them finer by far—fresher, tenderer, sweeter—than when gathered in the fall, and have never lost a sound head. I have gone out in March, when there was three feet of snow on the spot, and with shovel and crow-bar, have exhumed such cabbages as would have made your correspondent's mouth water, and long after the frost was out of the ground, I have found them equally good. This mode is attended with some more labor, than that of huddling them into large holes or trenches, or hanging them up in the cellar, but to those who are fond of fresh cabbage in the spring—and I confess to an especial fondness for the same, having spent many years in the capacity of a *tailor*—the extra pains is labor well bestowed. N. H. *Ballston Spa, June*, 1847.

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Proper time for cutting Timber.—In the June number of the Cultivator, I notice a few remarks from "Agricola," on the subject of cutting timber, in which he says, that early in March, 1846, they cut timber (chestnut) which was frozen hard, and that sprouted well the ensuing summer. He also inquired what could make the difference between his experience and that of my own, in the article to which he refers.

In reply to our observing friend we will say, then, that as his own remarks go to show the early part of March, 1846, partook very distinctly of much of the character of mid-winter—at any rate his chestnut timber *was frozen hard* when he cut it—that was the case with timber in our own surroundings; and more, the snow was from three to four feet deep upon a level with us, until, probably, the 10th or 15th of the month. Of course there was no great amount of freezing and thawing about those days; but, on the contrary, the temperature savored more of that of December than of March.

The fact he notices was observable with us. Considerable chestnut and other timber was cut down, while frozen, early in March, and from those stumps, made under all circumstances like those of trees fallen in the heart of winter—except that the days and nights to pass away before the time of the expanding leaf, were to be fewer than when the chopping was done at an earlier season—sprouts started and grew vigorously the coming season.

Nor is this, in any way, derogatory to the fact that we then asserted in 1846, but merely a different result, arising from different circumstances. Had his timber been in a condition like that of ours, when he cut it down, we think it very probable the same effect would have been produced. But when timber is frozen *hard*, and *bleeding* takes place at the time of cutting—for there is very little, if any, circulation of sap at that time in the timber, more than there is in the flow of water on the surface of a river, when it is thoroughly converted into a mass of ice. Perhaps we may venture to suppose, that previous to the process of thawing in the timber or stump, the sap vessels, at the point of disintegration, became seared, or so callous as to prevent a serious loss of the sap. At any rate, the tubes or vessels through which the sap ascends, cannot be in that perfect state for rapid action in which it is found when the root is sending up materials for new foilage and new growth.

Since we are upon the subject, we will say, as it often happens that timber must, for convenience if never from necessity, be cut in seasons when the sap is in full flow, to those who are careful of their timber lands, it must be a desideratum to use efficient means to prevent the loss of sap by excessive flowing, and consequently the loss of new shoots, which should be sustained and nourished by the old roots until they can prepare themselves to draw nourishment from their own resources. To do this effectually, it is only necessary to cover the stump with some substance—no matter what—that will close the pores, and thus prevent the waste which ends in total loss. We have effected this object by simply smearing the surface of the stump with muck in its naturally wet state, and clay is very good, when worked to a salvey consistency; but the best panacea of all that has come within my observation, is to take soft manure from the cow stable, and mix it in equal parts with almost any loamy earth, and worked so as to spread freely but firmly over the wounded part. Of the healing qualities of the former substance there can be no mistake in the minds of those who have witnessed its efficiency, and the latter seems to give it a consistency which renders its continuance on the parts where applied as durable as necessity requires.

Notwithstanding the almost boundless forests in many parts of our country, there is no question but the protection and preservation of timber lands is yet to become a great question in our national economy. Indeed, it may well be so now in many sections of almost every one of our lovely sisterhood of States, and with our increasing population, rolling like a great flood in every direction, and our manufacturing enterprizes, building cities by every waterfall, and exploring the earth for its secret treasures under every mountain and along every valley, its importance *must increase*. Prudence, then, dictates that, although an abundance *await us* from that already grown for every needful supply, that a due regard to the well being of another age, we regard this subject with liberal views, and act with a benevolent and just reference to their comfort and interest. W. Bacon. *Richmond, Mass.*, 1847.

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Ide's Wheel Cultivator.—In the September number of the Cultivator, is an engraving of "Ide's wheel Cultivator and wire grass Plow," an advertisement of which appeared in the August number of your paper.

From the name, I was led to suppose, that it was fitted to eradicate that pest of the farmers, "wire grass;" but as neither you, nor Mr. Ide in his advertisement. say anything on the subject, but in enumerating its advantages leave that wholly out, I am left in doubt. If this cultivator will eradicate wire grass, witch grass, and other tough rooted grasses, it will prove a very useful invention. Will you, or Mr. Ide, have the goodness to inform me, whether this implement justifies its name, "wire grass plow?" Where it can be procured, and at what price? From its description, I conclude it is to be used for the second, or cross plowing.

I think if persons, who have newly invented implements to sell, would, in their advertisements, be a little more particular as to the properties of the implement, and would name the price, it would save much trouble; and probably would, in many cases, ensure their sale. When a farmer sees a new implement advertised, he wants to know its properties and price; and then he will be able to judge whether the proposed benefit and his means will justify the expense. P.

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Lime as Manure.—Lime appears to have succeeded much better as manure in some regions of the country than in others. The eminent success which has attended its use in many places, should induce a trial, at least throughout the country.

Two communications have appeared in the *Ohio Cultivator*, describing its very successful application, of which the following is the substance:—The first experiment was eight or nine years ago, with three acres of old, worn-out field, the soil clayey, with some loose sand stones. It was applied at the rate of 100 bushels per acre, after the land was plowed, and before it was harrowed, for corn. The corn on the limed ground was nearly twice as heavy as on the rest. The same was true of the oats that followed the corn; and of the wheat after the oats; and of the clover after the wheat, where the heavy growth indicated to a foot where the lime terminated. A subsequent communication from the same writer states, that lime had been applied both with and without manure. "When we put on the lime, we always put on all the manure we make, either in the spring or in the fall—which is from 75 to 100 cart-loads. Lime itself will make the ground produce about 50 per cent.—lime and manure, 100 per cent.—when we put on 100 bushels of lime per acre, which we always aim to do."

Sorrel.—The same correspondent states that a sandy field, or a hill of chestnut, poplar, and hickory timber, soon after it was cleared, failed to produce much grass, or anything else than "horse sorrel." A hundred bushels of lime per acre were applied before sowing wheat, and clover sowed on the wheat towards spring. "The sorrel left about the time it saw the young clover, and has not been seen since."

Farmers who have applied lime with partial or little apparent benefit, often estimate its use erroneously, by not taking into account the long endurance of its enriching powers, which is many times that of common barn manure.

Varieties in Wheat.—Lawson describes 83 varieties in wheat; Le Couteur 150; and the Museum of e Agricultural Society in Scotland has 141 varieties.

SALES AT THE STATE FAIR.

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We are more and more convinced of the advantage of incorporating with our agricultural exhibitions, the feature of purchase and sale. If the shows were held at central and accessible points, we are satisfied that the opportunities they would afford for buying and selling live-stock of all kinds, implements, valuable seeds, &c., would go far towards keeping up the interest and insuring respectable exhibitions.

At the late meeting at Saratoga, there was a very good display of implements, and we believe that sales and orders, chiefly by a few individuals, were made to the amount of $1200 to $1500. The sales in live stock were also considerable. We were informed that the pair of matched horses which took the first premium were sold for $1000, and that several other pairs were sold at fair prices, as well as several breeding mares and young horses. In cattle, there was considerable inquiry for young Durhams of good quality. Several sales were made, and more might have been made, had there been on the ground a sufficient number of such as were wanted. On account of this deficiency, several persons who wished to procure Durhams, went away without purchasing. Nearly all the Devons which were offered for sale, found purchasers. Mr. Washbon, of Otsego county, and his associates, who exhibited stock with him, sold to the amount of about $700—chiefly calves, at $50 to $75 each. Cattle of other breeds, as Herefords and Ayrshires, might have been sold had they been offered.

In sheep of all kinds, and in swine, there were but few sales, not owing to want of purchasers, but to the lack of a proper assortment.

Now, if, as before observed, these exhibitions could be made in reality *fairs*—especially for the sale of the choicest stock, and the most useful implements—the object of buying or selling would induce the people to come forward on these occasions with whatever is *best suited to the market*. This would afford a healthy stimulus, and the producer would feel safe in devoting his attention to those objects for which the marketable demand should afford the greatest profit.

We would make a suggestion in relation to another matter which we think of considerable importance. A great objection with farmers residing at a distance from the places where the shows are held, in regard to the exhibition of their stock, is the expense to which they would be subjected, while at the same time there is much uncertainty whether they would receive anything as a remuneration. To obviate such a difficulty, the agricultural society of Worcester, Mass., and some other societies, have adopted the practice of paying *travelling fees*. Such animals as the examining committees think worthy—whether they receive premiums or not—are, on their recommendation, entitled to receive a certain sum per mile for the distance they have travelled in coming to the show. Of course, inferior animals are not entitled to any such encouragement. This rule effectually does away the objection that those situated near the place where the shows are held, have all the advantage in regard to competing for premiums.

Liquid Manure.—The papers occasionally contain accounts of interesting and very successful experiments with liquid manure. It is indeed very valuable; but we believe a large share of the advantages result from the simple watering which the plants thus obtain. The manure itself should not by any means have all the credit, as we know very well from experience, that a simple, a regular irrigation of garden plants, has in some cases caused an increase in growth which would hardly be expected from the most copious manuring.

EXHIBITIONS OF AGRICULTURAL SOCIETIES.

From the accounts we have received, and from what we have ourselves observed, we believe that the exhibitions of agricultural societies have in general been better attended the present year, and have in most cases been of a more interesting character, than formerly. The inference deducible from this is, that the public are becoming more interested in rural pursuits, and that agriculture and its associated arts are assuming in the minds of the people the elevated position which they deserve. The effect cannot but be salutary on the prosperity and happiness of the country at large. It will be the means of bringing a greater mental force and energy to the cultivation of the earth, and on the sure principle that "knowledge is power," will give to the farmer and artizan greater success in their vocations, and greater influence in their social and political relations.

We had the pleasure of attending three of the exhibitions in Massachusetts and one in Connecticut, viz: Pittsfield, Springfield, Northampton, and Hartford. The little space allowed us in the present number will not admit of our entering much into detail in describing the many interesting matters which we met with at these shows. Being, therefore, under the necessity of speaking in general terms only, we trust our friends will discover a reasonable apology for omissions, in the circumstances we are placed under.

The show at Pittsfield was on the 6th and 7th of October. Finding that the show at Springfield took place on the same days, we left Pittsfield at the close of the first day, in order that we might be at Springfield in time to witness a part of the exhibition at that place. The exhibition at Pittsfield was the *thirty-seventh* which has been held by the Berkshire county society—that association having instituted the first "cattle show" in the United States, in 1810. The increasing success which has attended the long career of this society, affords unmistakeable evidence of its good management. The exhibition on the present occasion was in most respects considered as good as usual. The most interesting feature of New England agricultural shows generally is the working oxen, and the display of these at Pittsfield was quite large, and there were many valuable pairs—though, to be candid, we must say, that too large a proportion of them were large-boned, rough, and quite too coarse for profit either as feeders or workers. The objection of coarseness would also apply in some degree to the cows, yet some of them were not obnoxious to this charge, and were evidently valuable animals. There were but three or four bulls offered, and they by no means of superior excellence. There were some very fine swine, and hardly one that was not good. The sheep were not numerous, and in general of only middling quality—but there were a few good Merinos. The show in the hall was said to be not so large as that of last year. There were, however, handsome specimens of various household fabrics, dairy products, fruits, vegetables, specimens of the mechanic arts, &c. As we left on the first day, we did not hear the address or witness the plowing match.

At Springfield the exhibition was equal to former years. Not having been present on the first day, we only saw the exhibition of horses—which was uncommonly fine—and the display in the hall. The latter was altogether good, and in some respects superior. The show of butter and cheese was the best we ever witnessed for a county society. The butter was arranged for exhibition in a manner worthy of imitation. A sample of each lot was moulded into handsome lumps and placed under a tight glass case, secure from dust and the action of the air. Apples, pears, and other fruits were numerous and of superior appearance. The show of vegetables was really very fine, comprising the finest specimens of the choicest of our culinary articles. The ornamental decorations of the hall were of a very tasteful character—the flowers especially being arranged in beautiful style. The address was delivered by Prof. C. U. Shepard, of Amherst College. We took some notes of it from which we shall endeavor to furnish a sketch for our next number. At present we can only say that it was highly interesting and strictly utilitarian in its character.

The exhibition at Northampton was on the 13th and 14th of October. Here, also, we were unable to spend but one day, as we were desirous of being at Hartford on the 14th. The society located at Northampton, formerly embraced the three counties of Hampden, Hampshire, and Franklin; but the former county has within a few years organized a society of its own, holding its exhibitions at Springfield.

In most departments, the display at Northampton was large, and in general it was very satisfactory. The working oxen were out in greater numbers than at any show we have attended for several years. The town of East Hampton showed a team of 39 yoke, West Hampton forty-four, South Hadley twenty-eight, and Conway twenty-three yoke. The latter team was in general appearance superior to any one of the same size we ever saw from one town. Besides these teams there were many single yoke of oxen of fine appearance. There were a few superior milch cows; but the bulls were not of a quality which would entitle them to commendation. There were a few very good pigs; but no good sheep—at least we saw none.

The display of fabrics was not large. The venerable Dr. Stebbins, of Northampton, with unabated zeal in the silk cause, exhibited almost every description of silk article, from the cocoon to the wrought fabric, and *mulberry paper*. Fruits were especially fine, comprising specimens of the choice new pears. Vegetables were well represented. Dairy products respectable as to quantity; we were told the quality was unexceptionable.

The plowing match was contested by eighteen teams, and most of the work was executed in a creditable manner. But we shall probably speak more particularly of this and some other matters hereafter.

Worcester County, Mass.—The annual show of this long-established and useful society, took place at Worcester on the 23d of September. In some departments the competition was less than it has usually been. The general show of animals, however, is stated to have been very good, and that of manufactures better than last year. The show having been held a fortnight earlier than usual, and books having been offered instead of money for premiums, it is thought operated to render the show less interesting.

The show of the Worcester Horticultural Society, which took place at the same time of that of the Ag. Society, was excellent.

Essex County.—Show held at Lynn, September 29th. From several accounts we have seen, the exhibition appears to have been a very good one. Thirty teams were engaged in the plowing match, and there was also a good show of working oxen. The address, by T. E. Payson, is highly commended.

Middlesex County.—Show at Concord, Oct. 6th. The *Mass. Plowman* says—"we perceived no falling off in the number of people present, or in the live stock and manufactures exhibited. The fruits too were quite abundant and of excellent quality." The double teams in plowing were required to plow to the depth of nine inches, and the single teams (that is one pair of oxen or horses) eight inches. The address was by E. H. Derby, Esq.—the subject, a statistical account of the business of the county.

Connecticut.—The principal days of the Hartford County show, were the 14th and 15th of October, though the in-door part was kept open the greater part of the week. Without intending any flattery, the entire display may be pronounced one which did great credit to the citizens of Hartford, as well as those of the county generally. The in-door part was more extensive, and as a whole superior to any county show we ever attended. We regret that our limited space will not permit us to follow our inclinations by giving a more particular notice. We shall, however, avail ourselves of another opportunity to speak in reference to particular articles and things. The fruits of all kinds, common to the latitude, were good. Apples were very abundant, comprising many of the best varieties. Autumn and winter pears were also fine. The vegetable products numerous and good. Dairy products looked well. The fabrics were entirely "too numerous to mention."

Of cattle there were some good Durhams. A fat Durham ox, exhibited by Dr. Carrington, of Farmington, for symmetry and quality, is rarely equalled by the best of that or any other breed. There were also some good Devons, and some good mixed bloods. The working oxen made a large display, and they were generally remarkably good, both as to appearance and discipline. The plowing match had fourteen competitors. The ground was so wet that it was almost impossible to plow it well. A few teams, however, succeeded in making fair work; but in most cases the furrows were too wide, were turned over too flat, and left heavy and close.

The address was by Prof. John P. Norton, of Yale College. It was a sound, practical discourse, and was evidently received with great approbation. We shall probably be able to give it to our readers next month.

New-Haven County.—Show held at Waterbury on the 6th of October. The *Waterbury American* says it was a splendid exhibition, and doubts whether "in some points of view it has ever been exceeded by any county exhibition in the Union." It is stated that according to enumeration there were about 1300 head of working oxen, or 650 yoke. There were 164 yoke from Watertown, and from Waterbury 150 yoke. At a trial of strength it is stated that a yoke of oxen belonging to J. N. Blakeslee, of Watertown, drew a load of stone which weighed, without the cart on which it was placed, 8772 lbs.—They moved the huge load, it is said, "very handsomely." A pair of stags, belonging to J. A. Lewis, also moved the load. The show, altogether, passed off with great *eclat*.

Litchfield County.—Show held at Litchfield on the 29th and 30th of Sept. We learn by the *Inquirer*, that in articles of domestic manufacture, and horticultural and vegetable productions, the display was not as great as in some previous years; but that the superior quality of the articles exhibited the present season, in some degree made up for the deficiency. The show of cattle, horses, and sheep, is spoken of as numerous and of the first quality. The Devon cattle of Mr. Hurlbut, of Winchester, and the cattle and sheep of Mr. Blakeslee, of Watertown, are highly spoken of. The latter had thirteen pair of matched oxen and steers.

Vermont.—Windham County.—Show and Fair took place at Brattleboro on the 6th and 7th of October. The *Phœnix* says—"the articles and animals exhibited were highly creditable, and many of them of superior quality—though inferior, on the whole, to those exhibited at the fair last year."

Rutland County.—Show at Rutland on the 29th and 30th September. The *Herald* informs us that the collection of people on the occasion was very large, and that the show "was such as no county in Vermont or in New England need be ashamed of." The address, by Hon. George P. Marsh, is very highly spoken of.

Chittenden County.—Show held at Burlington on the 22d and 23d of September. From the very full and interesting account published in the *Free Press*, we have no doubt that it was a *first rate* affair. The show of animals was large—the horses, ranged in a line, extended half a mile. The show of fruits is said to have been "magnificent"—showing that the valley of Lake Champlain is not behind other sections in these productions. The show of butter and cheese was extensive. Of household manufactures more than 300 different articles were exhibited, "besides a large amount of fancy work." The address was by J. W. May, Esq.

New-York.—Greene County.—The annual Fair and Cattle Show of the Greene County Society, took place at Windham Centre, on the 20th and 21st days of September, and it is said surpassed any one previously held in that county. The collection of people was large, and all seemed animated with much zeal in the cause of agricultural improvement. There were three teams of fine oxen—two of twenty yoke each, and one of thirty yoke—from three different towns, which are spoken of as having attracted much attention. There were also some fine horses, milch cows, and other stock. The address was delivered by Mr. Johnson, secretary of the State Society, and was received with evident satisfaction. Col. Z. Pratt, of Prattsville, the President of the Society, to whose liberal exertions its prosperous condition is in a great degree due, in introducing Mr. Johnson to the meeting, made some appropriate remarks, in which he referred very happily to the advantages resulting to the farmers from their gathering themselves together—making the occasion a freeman's jubilee. During the exercises many odes were sung, among which was an original one of much merit by Miss Allen, of Washington county.

Oneida County.—The exhibition was held at New Hartford on the 23d of September. It was pronounced by many the best ever held in the county. The productions of the farm, garden, and dairy, were numerous and of good quality. There was also a good show of manufactured articles. The live stock is said to have been well represented. The exhibition was uncommonly good, especially that of working oxen. An exchange paper remarks, that "in horned cattle, butter and cheese, it was evident that this excelled the late State Fair at Saratoga."

Jefferson County.—The exhibition was held at Watertown on the 15th of September. The weather was unpropitious, it being rainy most of the day. There was, however, a very respectable show of horses and working oxen, and at the hall appropriated for their reception, were good specimens of vegetables, fruits, flowers, and manufactured articles. Dr. Lee, of Rochester, delivered the address, which was listened to and approved by a large audience.

The Rensselaer County Society held its exhibition at Troy on the 22d and 23d of September. We attended on the first day, and are pleased to say that the display of the products of agriculture, horticulture, the various mechanic arts, domestic and household manufactures, &c., was such as did great credit to the citizens of the county. In many respects the show was, both in extent and excellence, superior to any other county show we had previously witnessed.

The enclosure in which temporary buildings were erected for the occasion was filled—*jammed*, in fact—with people, and the animals and objects presented for exhibition. The fixtures were quite complete, in themselves, but space was wanting to accommodate so great a throng. It was estimated that the number of persons who entered the grounds during the show, was 12,000 to 15,000.

The display of fruits was uncommonly fine. The collection was quite large, embracing many rich specimens of the most esteemed varieties of apples, pears, peaches, nectarines, plums and grapes. Our limits will not admit of a detailed notice of the samples presented, but among the principal exhibitors we noticed the names of H. Burden, S. E. Warren, H. Vail and W. Buswell, Troy; T. Briggs and A. Briggs, Schaghticoke; W. Newcomb, Pittstown; A. Walsh, S. D. Smith and A. Clark, Lansingburgh.

The live-stock was numerous, and in each class comprised some very good animals. The show of horses was the largest and best we ever saw for a county society. There was also some good horses exhibited from out of the county, among which we noticed the "*Morgan Charger*," a compact and well made stallion, by Mr. Durrell, of Cambridge, Washington county. Mr. Long, of the same county, exhibited his horse '*Tornado*,' and another fine blood-horse called '*Eclipse*.' Very good horse stock was shown by S. M. Lown, Mr. Eccleshimer, (who had five beautiful colts and one mare,) I. T. Grant, H. Vail, M. Vanderheyden, and others.

There was a large number of cattle, among which were some good Durhams from the herds of Messrs. Vail and J. H. Willard, Troy, and J. Haswell, Hoosick; and many cross-bred and common cows which appeared to be good milkers. The working oxen made a large display. There were four or five teams of five pair each, from different towns, and several good single pairs besides.

The fine wooled sheep were not numerous, and the quality, with a few exceptions, not to be commended. There were some good full-blood and cross-bred South Downs, and a few superior grade long-wooled sheep.

The show of swine was good. Among them we noticed some superior ones offered by J. H. Willard, and H. Tolhurst, Troy.

The address was delivered by Hon. L. C. Ball, of Hoosick, and is spoken of by those who heard it, as an interesting and highly valuable production.

Montgomery County.—Show and Fair held at Fultonville. It is said to have been "all that the most sanguine anticipated"—the display being pronounced superior to any previous year.

Oswego County.—Show at Mexico on the 29th and 30th of September. The *Times* says the exhibition furnished satisfactory evidence of the increasing interest felt by all classes in the agricultural prosperity of the county. The address by the President of the society, J. B. Higgins, is spoken of in high terms.

Vernon Ag. Association.—This is a town society organized about a year and a half ago. The show for the present season was held at Vernon Centre on the 6th of October. No premiums were offered—yet we are informed that the shows have been well attended, and in horses, cattle, sheep, and swine, the display has been extensive and creditable. The exhibition of fabrics, as well as fruits, vegetables, and even flowers, was large and fine. We tender our thanks to Mr. L. T. Marshall, corresponding secretary of the association, for a printed account of the show.

Cayuga County.—Show held at Auburn 29th and 30th September. It is said to have been far the best exhibition the society has ever held—"exceeding the most sanguine expectations of its friends."

Dutchess County.—Show held at Poughkeepsie, Oct. —. The *Journal and Eagle* states that the exhibition of cattle, horses, sheep, swine, &c., was the most extensive that has ever taken place at any of the shows in that county. The display of fruits, flowers, vegetables, articles of domestic manufacture, &c., was thought to be superior to former exhibitions. The occasion gave great satisfaction to the numerous concourse of people assembled.

Madison County.—Show held at Cazenovia Sept. 29th and 30th. The exhibition of farm stock was less than usual. The number of people in attendance was much larger than was expected, showing that a deep interest is felt in the cause for which the society was instituted.

Livingston County.—Show at Geneseo September 29th. The *Livingston Republican* says the exhibition exceeded the highest expectations of all. The village is said to have been thronged with the multitude which assembled to witness or take part in the festivities. Hon. Allen Ayrault delivered the address, which was a sensible and valuable production.

American Institute.—The annual exhibition of this institution was held the past month, and was we think fully equal, in the department of manufactures and the arts, to any one we have attended. There was a handsome display of agricultural implements, from the warehouses of Mr. Allen, Messrs. Mayher & Co., and John Moore & Co., of New-York. In the department of agriculture, there was a fair show of butter, cheese, flowers, fruits and vegetables of various and rare kinds, Indian corn, and other grains. We were not able to attend the cattle-show until the second day's exhibition, when a portion of the stock had been, we understood, taken from the ground. From what we saw and heard, we inferred that the show would compare well with the previous exhibitions. The largest contributor to this department, we believe, was R. L. Colt, Esq., of Paterson, N. J., who had on the ground Alderney, Ayrshire and Devon cattle, white turkeys, white Guinea hens, white topknot and Muscovy ducks, black, white and spangled Poland fowls, Dorkings, Creoles, Jersey Blues, and Malays. Messrs. Bell & Morris, Lewis G. Morris, Wm. B. Oddie, of Westchester county, Dr. Poole of New-Jersey, Mr. Townsend and Mr. Blakeslee, of Connecticut, and others, had fine animals on the ground. The Messrs. Wait, of Orange county, and Mr. Halleck, of Ulster, exhibited some of their fine South Down and long wooled sheep. Mr. Wm. Stickney, of Boston, presented a boar and sow of the Suffolk breed, a sow of the Middlesex breed, just imported, and a litter of Suffolk pigs, which attracted much attention. They were all superior animals, equal, undoubtedly, to any thing of the swine kind in the country.

Potato Disease.—The most learned, thorough, and patient observations of the most eminent observers, are summed up in *Silliman's Journal*, showing conclusively that this malady is not caused by an insect or fungus; and the only satisfactory result arrived at is this:—That no nation should place its dependence solely on a *single crop*. If there is only one leg to the stool, and that is knocked out, the sitter thereon is at once placed in imminent jeopardy.

Oxen drawing apart, may be prevented by connecting the horn of one ox to the horn of the other by means of a strong cord, tied at the tips of each horn. Balls on the horns render this easy. So says F. Wingate, in the *Maine Farmer*.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

To our Agents.—We publish this month a list of Agents, for our publications, in New England and in this state, and shall publish a list of those in other states in our next. As we send no paper to any one after the year for which the subscription is paid, we are under the necessity of calling annually on our Agents to renew their efforts to obtain and forward the subscriptions of their friends. It is by these efforts alone that the circulation of the Cultivator is sustained; and while tendering our heartfelt thanks to those who have heretofore so liberally rendered us their assistance, we invite them and others, to lay us under increased obligations by extending their aid and influence to the ensuing volume. In making out the list, some names may have been accidentally omitted; but we hope no one, disposed to act as Agent, will fail to do so, even if he should not find his name in the published list.

Communications have been received, since our last, from A Subscriber, O-o, Elias Cost, R. G., L. F. R., J. J. H., H. C. B., James Eaton, Ik. Marvel, Autograph.

Books, Pamphlets, &c., have been received as follows:

Catalogue of Trees, &c., grown in the Seneca Lake Highland Nursery of E. C. Frost, Catharine, Chemung county, N. Y.——*Landreth's Rural Register and Almanac for* 1848, altogether the most valuable rural Almanac that we have met with, 100 pages duodecimo—embracing a great variety of information on all matters of interest to the farmer and horticulturist. From the publishers, Lea & Blanchard, Philadelphia. For sale at Little's bookstore, in this city—price 15 cents.——*Seeds of the Scuppernong Grape*, from S. J. Wheeler, Murfreesboro, N. C.

☞ We neglected to acknowledge, as we should have done in our last number, our obligation to Messrs. Lea & Blanchard, the publishers of the American edition of Youatt's Treatise on the Pig, for the engravings of the Portraits of different breeds of swine, with which our notice of that work was illustrated. A copy of that work should be in the hands of every one who raises pigs.

Fruit of an ancient Tree.—Among the fruits exhibited at the late show at Hartford, was an apple from the "old Wyllis tree," which was brought from England and planted where it now stands, *two hundred and eight* years ago. We saw this venerable tree; it stands within a few rods of the "Charter Oak," so renowned in Connecticut history. The apple tree has only a mere shell of the trunk, with a few small green branches; yet it bore a dozen apples, perhaps, the present season. By the kindness of some friends we received some specimens of the fruit, which may be seen at our office. The hollow in the old oak has probably increased considerably in size since it contained the Charter of the Colony, but it is still quite vigorous, and may stand another half century or longer.

Receipts at the State Fair.—The receipts at the late State Fair at Saratoga, were more than stated in our last. They amounted to $4,034.22, being but $298.95 less than at Auburn in 1846.

Geo. Vail, Esq., Troy, informs us that he has recently sold a bull calf, two months old, from his imported cow, Lady Barrington III, by Meteor, to the Hon. Adam Fergusson and J. Wettenhall, Esq., of Canada West, for $300.

Apple of the growth of 1846.—G. V. S. Denniston Esq., of this city, has left with us a Newtown pippin of the growth of last year, which is entirely sound, and bids fair to remain so for some time longer.

Blood Beet.—Mr. Thomas McMillan, of New-Scotland, has left us a winter blood beet, weighing 6¼ lbs.—divested of tops and earth.

Fine Squash.—We have received from Mr. Edwin Newby, (No. 8, Centre Washington Market, N. Y.,) a squash of a variety which he calls the "Cream squash." The seed, he informs us, was introduced from South America, three years ago. It appears to be the same kind that we have known under the name of "Cuba squash," "Custard squash," &c. It is highly esteemed by those who are acquainted with it, both for its taste and long-keeping qualities.

Importation of Pigs.—William Stickney, Esq., of Boston, informs us that he has recently imported from England, three "Improved Middlesex" sow pigs, and one "Essex white" pig. He had intended to have imported a boar, of the Middlesex breed, but the one purchased in England died on the passage. He has, however, sent for another. Mr. S. says—"I prefer the appearance of the Middlesex to the Essex—they are larger than the Suffolks, and equally as fine." He has, at the present time, no pigs to spare except a few of the age of six to ten weeks.

☞ We have received from Mr. Thomas H. Horton, of New Lebanon, a handsome sample of oats, which we are inclined to think are the White Tartarian variety.

Fine new Plum.—We have received a sample of another Seedling plum from the garden of Mr. Isaac Denniston, whose fine seedlings have so often attracted attention. It was in perfection the first week in October, and is an excellent plum, closely resembling the Imperial or Prince's Gage, and fully equal to it in flavor.

Crib-biting.—Horses sometimes contract the habit of biting their mangers, or whatever hard substance they can lay hold of. The habit results in considerable injury to the animal, in consequence, as is commonly supposed, of his sucking or drawing in air. Mr. Youatt says the crib-biting horse is notoriously more subject to colic than other horses. He says, also, that this is one of those tricks which are very contagious and difficult to cure. The habit is so inveterate that when horses addicted to it have been turned to pasture for the purpose of curing it, they have been known, according to Mr. Youatt, to gallop across a field for the mere purpose of having a gripe at a rail. Mr. Y. suggests that a strap buckled tightly round the neck, by compressing the wind-pipe, will prevent the horse from "cribbing."

Wells Lathrop, Esq., of South Hadley, Mass., has a very valuable horse which has had this habit for sometime; but by the use of a small strap, fastened round the neck just so tight as to bear on the windpipe, he is effectually prevented from biting, and the horse is not in the least injured.

Fungi.—Professor Way, of Cirencester Agricultural College, thinks the celebrated *fairy rings*, known in England and Scotland, are caused by fungi, the seeds or sporules of which, from some cause or other, become deposited on the surface of the ground, and spread in circular form. He analysed the ash of fungi, gathered in one of these rings, and found it very rich in the inorganic elements of vegetable life. The fungi also contain a great quantity of nitrogen, and when gathered and placed in a heap in warm weather, they fermented rapidly, and gave off a disgusting and putrid smell, in every way resembling that of decomposing animal matter. Some of this fungi was collected and spread in the form of letters on the grass of a pasture, and the effect was readily seen in the superior growth of the grass for a month afterwards. There is at least one species of fungus in this country, which, after exposure to the air for a few days, begins to decay, and in a short time emits a carrion-like odor, and we have seen the maggot of the flesh fly revelling in its putrescence.

Improvement in Preparing Wheat and other Grains for Flouring.—Mr. S. Bentz, of Boonsboro, Maryland, has invented a machine for preparing wheat for flouring, which appears likely to be highly useful. He has forwarded to the Executive Committee of the N. Y. State Ag. Society, samples of grain which have passed through this process, and the Secretary, Mr. Johnson, has furnished us the following account of the machine:

"The improvement consists in taking the outer coating or bran from the wheat kernel *previous to grinding*. Its advantages are said to be—improving the ordinary kinds of red wheat from 5 to 15 cents per bushel—making from them *as good and fair flour* as is *now* made from the best varieties. It also saves in each barrel of flour from 40 to 52 pounds of wheat. A great saving of time in grinding is secured. It produces also the best *hot climate flour* known.

"Samples of wheat as grown, and with the bran off, may be seen at the Agricultural Rooms, and the attention of farmers and millers is invited to an examination of the specimens. The Executive Committee have awarded to Mr. Bentz a diploma. They hope to be furnished hereafter with a full account of the process, with samples, and with the results."

Fondness of the Indian for the Apple.—The fondness of the Indian for fruits and vegetables, has often been remarked. Mr. Schoolcraft, in his Report on the Iroquois, says, the apple is the "Iroquois banana." After the introduction of this fruit into this country from France and Holland, the Indians, "captivated," as he observes, "by its taste, lost no time in transferring it by sowing its seeds, to the sites of their ancient castles. "No one," he adds, "can read the accounts of the destruction of the extensive orchards of the apple which were cut down on Gen. Sullivan's inroad into the Genesee country in 1779, without regretting that the purposes of war should have required this barbaric act. The census will show that this taste remains as strong in 1845, as it was 66 years ago."

Rensselaer Institute.—In publishing the report of the Board of Examiners of the Rensselaer Institute, says the *Troy Daily Whig*, we cannot omit contributing our mite of praise to their testimony in favor of the institution. If the graduates of the Institute, who lectured at Morris Place Hall, may be considered specimens of the students it sends forth to engage in practical scientific pursuits, then its cadets have nothing to fear from a comparison with those of West Point. At present, we believe, the number of students is limited to thirty. It ought to be extended to one hundred, and for this end liberal additions to the original endowment should be made. But few of our citizens know the value of the institution in their midst, which for years has been quietly furnishing some of the best practical engineers, chemists, &c., in the country. Had the Rensselaer Institute been located in Boston, it would long since have felt the effects of that private munificence of which every New England College and school of art and science, has been the recipient.

We hope one day to see this institution expanded into a Polytechnic School, embracing within its circle of instruction all that is taught in the Polytechnic School of Paris.

To protect the Lungs in Thrashing.—H. N. Lowry, in the *Ohio Cultivator*, gives the following mode, which is perfectly effectual. A piece of the finest *sponge*, large enough to cover the mouth and nostrils, is hollowed out so as to fit closely; a tape is fastened round and tied over the top of the head. Soak it in soft water, and then squeeze it well. When ready for work, tie it over nose and mouth, and you can breathe and talk through it almost as well as without; and in a perfect fog of dust, the air will be as clear as in a cornfield. He states that it will, however, prove troublesome to those who use the "filthy weed."

Splendid Evergreens.—J. J. Smith, of Philadelphia, states in the *Horticulturist*, that at Dropmore, near Windsor, the seat of lady Grenville, there is a great *double avenue* of immense Cedars of Lebanon—and that the *Pinetum* there, containing all known hardy cone-bearing trees, comprises 170 species.

Rural Sounds.—The enlightened advocate of country life, will approve of the cultivation of a taste for the natural pleasures of a life in the country. An acquaintance with the peculiar habits, and sly tricks, not to say amusing speeches, of small animals, such as birds and bull frogs, often affords a pleasant recreation for a spare moment.

Charles Waterton, in his interesting and rather marvellous narrative of his travels in South America, remarks, that it is quite flattering that so many birds there speak English! A large portion of the birds of the United States furnish the same compliment to our language, or at least a very little imagination enables any one to translate their songs to very fair English. Every boy, almost, is familiar with the well known shout of the quail or partridge, of "Bob-White!" or sometimes, "Wash-face-white!"—and also of the Rice bird, or familiar Bob Lincoln—"Bob o'link! Tom Denny! come pay me the two and sixpence you've owed me a year and a half ago, or clear!" A southern writer, however, says that the song which the Bob o'link there most frequently utters so rapidly to his mate, is very nearly as follows:—"Bobby Lincoln—look, Mary Lincoln—velvet pantaloons and summer jacket, ho!—Bobby Lincoln won't let Mary Lincoln gad about alone over clover top, dock-weed, and apple tree—nor shall she marry Michael Mangel Wurtzel!"

A pleasant old gentleman used to say, that he often heard the common American robin, shouting out, "skillet! skillet! three legs to a skillet! two legs to a skillet!" And a certain facetious doctor, in Cayuga county, affirms, that when riding out on his professional visits, the robins usually perch on the fence stakes, or road-side trees, and address him thus:—"Kill 'em! kill 'em! cure em! cure 'em! give 'em physic, physic, physic!"—which it must be admitted is a very correct version of the song of most robins. A tailor once told me, what a bird said to him, and by which I immediately recognized it as the song-sparrow—"Prick yer fin-ger, suck it, suck it well!"

Even the frogs sometimes seem to indulge a little in humorous or sarcastic ditties, for one sings out, "Jug o' rum! jug o' rum! jug o' dhrum!"—while another answers—"Paddy got dhroonk, got dhroonk, 'oonk 'nk!"

Corn.—The crop the present season will probably be enormous and prices low. An opinion, very generally expressed in different parts of the country, is, that at least double the usual quantity has been planted.

Dairies in England are always paved with stone or brick, and in warm weather kept constantly wet, so as to be equal to the spring houses of Ohio and Pennsylvania.

FALL AND WINTER PLOWING.

……

Plowing late in the fall and during winter, may in some instances be beneficial; in others injurious. As a general rule, the principal reason that can be given in favor of the practice, is that the work is performed at a time of leisure, and the farmer is relieved from the pressure and hurry which would attend the crowding of all his plowing into a few days of spring. Loose gravelly and sandy lands are not, probably, injured by late plowing; but compact soils, if plowed in fall, are sometimes so beaten down by the heavy rains of winter and spring, that more labor is actually required to bring them into suitable condition for crops, than if they had not been touched till near the time of sowing or planting.

The idea that any thing is gained by the decomposition of sward by late fall plowing, is, we are convinced, a mistake. On the contrary, every one who has had the opportunity of observing, may have seen that sward which is broken up after the weather has become warm, and the grass somewhat started in spring, rots much sooner than that which was plowed in fall or winter.

But clayey soils, which have been well drained, may be greatly improved by fall plowing, if it is done in the right way. The ground should be thrown into narrow ridges, which should run in such a direction as will most readily turn off the water from the field. Let two furrows, as deep as can well be plowed, be turned together, in the form of what are called "back-furrows," and the whole field be plowed in this way. This will expose a large portion of the soil to the action of the frost and air. The ridges will be dry, and the soil being frozen and thawed while in this state, it will become loose and friable, and on cross-plowing the ridges, when the proper time arrives for seeding, the soil will be mellow, and in excellent condition for a crop. This course has produced good crops of grain and vegetables on land which would yield little or nothing in any other way.

Land which is overrun wtih couch-grass, may also be plowed in ridges in the fall to good advantage—especially if the soil is of a compact nature. The freezing of the roots will tend to weaken their vitality, and greatly facilitate the cleaning of the land, which should be done by a thorough fallowing, and working out the grass roots, which should be collected and burnt the next season.

NEW VARIETIES OF INDIAN CORN.

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In the Cultivator for 1845, page 28, is a communication from the late Judge Darling, of Connecticut, in relation to a new variety of corn that he had produced, by mixing sweet corn with a very early variety. A sample of the new variety was forwarded to us, which was distribeted to different persons in this vicinity, by whom it has been since raised. It proves to be a highly valuable kind on account of its earliness—ripening nearly a fortnight earlier than common sweet corn, and at the same time with the earliest Canada corn known among us.

Another instance of producing new varieties of corn by intermixture, has lately been made known to us. Mr. John Lossing, of this city, being on a visit to Kentucky in 1844, brought from Mr. Clay's farm at Ashland a few ears of corn. It was rather a gourd-seed variety, similar to what is frequently met with in the region where it grew, having from twenty-four to twenty-six rows to an ear, the stalks growing from twelve to fourteen feet high, and requiring more time to ripen than our seasons generally allow. Mr. L., however, planted it as early as practicable in the season of 1845, and afterwards planted alongside of it some common eight-rowed sweet corn—planting the latter so late that it would come into blossom at the same time with the corn from Kentucky. When the corn ripened, he found the sweet corn more or less mixed, as had been expected, with the other. He picked out the sweet grains, which are easily told by their shrivelled appearance, and in the spring of 1846 planted them, at a distance from other kinds. The produce of that season more plainly indicated the mixture—the ears were generally larger than the former sweet corn, with an increased number of rows—some ears showed a preponderance of one variety, and some of the other. In 1847 he again planted by themselves the sweet grains from the largest and handsomest ears that were best mixed with grains of another kind. The result is that he has this year produced a kind of sweet corn having considerably larger ears than any sweet corn we have ever seen before; but having the general habit of growth as to size and height of stalk, and ripening at the same time that the old kind of sweet corn did.

The first year of these experiments, there was also a few grains of corn planted which were the result of a mixture of sweet corn and the large white Tuscarora corn. This was allowed to mix with the Kentucky corn in the same way that the other kind did. The produce of this is, therefore a mixture of three kinds—the Kentucky, the Tuscarora, and the Sweet. The same course in regard to planting by itself, was pursued with this as with the other kind, for 1846 and '47, and the produce the past season is quite uniform and distinct. The grains have the size of the largest Tuscarora corn, with the shrivelled character of the sweet, and a flecked or reddish tinge denoting the Kentucky cross.

Samples of the above kinds of corn may be seen at our office.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Oct. 20. 1847.

FLOUR—Genesee, per bbl. $6.56a$6.60—Ohio and Michigan, $6.56a$6.62.

GRAIN.—Wheat, per bu., $1.40a$1.42—Corn, northern, 75a 78c.—Rye, 90a93c.—Oats, 47a48c.—Barley 75a78c. ½

BUTTER—Orange County, per lb., 20c.—Western, dairy, 15a17 cents.

CHEESE—per lb., 6½a7½c.

BEEF—Mess, per bbl., $11a$12—Prime $7.75a$8.25.

PORK—Mess, per bbl., $14.87a$15—Prime, $10.50a$10.75

HAMS—Smoked, per lb., 11cts.

LARD—Per lb. 10a11½c.

HEMP—Russia clean, per ton, $225.

HOPS—First sort, per lb., 9a11c.

COTTON—New Orleans and Alabama, per lb., 9a12c.—Upland and Florida, 9½a12c.

WOOL—(Boston prices,) Oct. 19.

Prime or Saxon fleeces, washed per lb........	45a47½	cts.
American full blood fleeces,....................	40a42½	"
" three-fourths blood fleeces,.........	34a36	"
" half blood do	32a35	"
" one-fourth blood and common......	28a30	"

Remarks.—By the Cambria, which arrived at Boston on the 19th October, (she having left Liverpool on the 5th,) we have news of a further decline of flour in the British markets of about two shillings sterling per barrel. The news has, however, had no perceptible effect on our own market, and the demand is brisk at our quotations. Indian corn in England was in fair demand. The failures of English corn dealers have continued up to the latest dates, and the derangements in commercial affairs are disastrous. The potato disease is much less virulent in the British Islands than for two previous years.

There is considerable demand for provisions, especially for pork and for butter.

BRIGHTON CATTLE MARKET, Monday, Oct. 18.

At market 1600 beef cattle, including 1950 stores, 14 yokes working oxen, 46 cows and calves, 5200 sheep and lambs, and about 3500 swine.

Prices Beef Cattle.—Extra, $7.25, first quality $6.75, 2d and 3d do. from $4.50 to $5 75.

Store Cattle.—Sales were not noticed.

Working Oxen.—Sales made at $70, $74, $89a$103.

Cows and Calves.—Sales noticed at $16, $19, $22, $26, $30a $42.50.

Sheep.—Sales of old sheep were made at $1.75, $2.33a$.237; lambs at $1.63, $2.12, $2.23a$3.

Swine.—At wholesale 4½a5½ for shoats; at retail from 5½ to 6½; old hogs, fat, at 5½ to 6c.; do. do. lean, 5c.—*Boston Traveller*

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Troy, L. Willard
Tappantown, D. D. Horing
Towanda, Dan'l Butts
Three Mile Bay, Chas. Wilcox
Turin, E. Gaylord
Towners, B. Benedict
Ticonderoga, A. J. Cook
Tyrone, S. H. Arnold
Trenton Falls, W. Broadwell
Trenton, L. Guiteau, Jr., M. D.
Truxton, R. C. Babcock
Tyre, J. Smith
Townsendville, W. F. Coan
The Purchase, J. T. Carpenter
Triangle, W. Jackson
Tribe'sHill A. W. & W.B.Hull
Trumansburgh, Jas McLallan
Turner's Depot, Wm. Nichol
Tarrytown, J. Odell
Tomhannock, J. L. D. Eycleshimer
Union, A. K. Ketcham
Unadilla, S. Cone
Union Mills, Francis Veeder
Upper Red Hook, J. Rowley
Utica, W. Bristol
" D. Redmond
Valatie, B. Mesick
Victory, Jas. Wallace
Visscher's Ferry, Jos. G Conkrite
Van Buren, J. Talmadge
Verbank, Chas. Coffin
Voorheesville, Steph. Ostrom
Varney, J. Hollister
Verona, G. T. Peckham
Vernon, Jas. Turner
Vernon Centre, E. M. Foot
Walesville, A. Buell
Waterville, Jas L. Tower
Willink, J. Bicknell
Williamsville, A. H. Moulton
Wales, Wm. Brockway
Wyoming, J. W. Paddock
Wright's Corners, E. G. Peckham
West Almond, H. McGibeny
Whitestown, W. C. Champlin
Wheeler, O. F. Marshall
Wayne, Jos. Mitchell
Westerloo, N. T. Carryl
Westmoreland, A. H. Halleck
Willett, C. J. Blisc
Waterloo, E. Birdsall
Waverly, S. Harvey
Westchester, S. B. Bowne
White Plains, J. R. Sherwood
West Farms, F. Barretto
West Somers, W. B. Ferris
West Galway, Geo. Ainslie
West Bergen, L. H. Stephens
West Exeter, H. C. Park
West Bloomfield, T. R Peck
Walworth, T. G. Yeomans
Williamson, W. H. Rogers
West Hebron, Chas. Webster
Windsor, W. Swagart
Whitney's Point, J. D. Smith
White Creek, D. P. Sisson
West Dresden, W. Holden
Walton, A. White
West Meredith, J. Mean
Walkill, D. C. Wisner
Walden, A. Hill
White Store, N. N. Green
Whitehall, A. Hall
Washington, D. B. Haight
Washington Hollow, D. Sands
Wappinger's Creek, H. A. Masier
Woodbourne, J. W. Gray
Westport, Rob't Stevenson
Wheatland, John Murdock
Windfall, D. Preston
Watertown, E. S. Massey
Woodville, J. Miner
Wilton, J. Newland
West Greenfield, H. Gardner
West Milton, H. Van Ostrand
Waterford, D B. King
West Charlton, H. Ostrom
Wilmot G. Hinckley
Warren, Z. W. Bingham
Winfield, J. H. Clark
West Winfield, D. R. Carrier
West Sand Lake, Benj. Judson
Windham Centre, P. Lewis
Youngstown, J. Ladd
Yorkshire, S. R. Crittenden
Yonkers, J. V. Fowler
Yorktown, Jas. H. Purdy
Yaphank, J. H. Weeks
York, J. Allen

FRUIT TREES.

THE subscriber offers for sale, at his Nursery in Canterbury, Orange County, N. Y., a general assortment of the choicest varieties of Fruit Trees, embracing 110 varieties of Apples, at 25 cts.; 80 of Pears, at 50 cents; 96 of Plums, at 50 cents; 30 of Cherries, at 37½ cents; 35 of Peaches, at 12½ cents; 13 of Apricots at 25 cts.; 30 of Gooseberries at 12½ cents; Hovey's Seedling Strawberries at 75 cents per 100 plants; Stoddard Seedling Alpine at $1 per 100; Redwood, $1 per 100; Boston Pine, 50 cents per dozen; Large Early Scarlet, 50 cents per 100: Raspberries of several varieties, 10 cents each. Also, 50,000 Seedling Stocks, embracing Apples, Pears, Plums, and Cherries. CHAS. HAMILTON.

Cornwall, Nov. 1, 1847—1t.

ELEGANT RESIDENCE AND FARM FOR SALE.

SITUATED on the west shore of Cayuga lake, two miles south of Cayuga Bridge, in the town of Seneca Falls, Seneca Co. Farm contains 175 acres of first quality land. 130 acres improved and under cultivation, the remainder woodland. The buildings consist of a large two story brick mansion, with a rear frame building, also two stories high, wash-room and woodhouse attached. The main building has four rooms on the first floor, with a wide hall through the centre. The two front rooms finished for parlors, with marble mantels to the fire places. Four large bed rooms in the second story, with dressing-rooms and pantry. In the rear building is a large kitchen and dining-room for work people, with four bed-rooms in the second story; cistern and pump in wash-room—a good well of water near at hand. The out-buildings are a new carriage-house, barn, and shed. A board fence the whole front of the farm. Handsome ornamental and picket fences in front of house, enclosing a large lawn and garden. All the buildings and fences, with the exception of barn and shed, have been built and repaired within two years, and done with a view of permanent residence. The situation, as to variety and beauty of prospect and scenery, exceeded but by few if any in western New-York. There are large apple and peach orchards, of the best and choicest kinds of fruit. Also pears, plums, and cherries, of the finest quality. For further information as to price and terms of payment, with such description in addition that may be desired, application can be made personally or by letter, to the subscriber, on the premises. Letters addressed Oakwood Farm, near Cayuga Bridge, will have prompt attention.

JOHN OGDEN DEY.

Nov. 1, 1847.—1t.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

A VALUABLE FARM AND COUNTRY SEAT AT PRIVATE SALE.

SITUATE on the Camden and Amboy Railroad, about 6 miles from Trenton, and 4½ from Bordentown, and within two hours of Philadelphia, and three hours of New-York by Railroad.

It contains 190 acres, about 40 in wood and young timber, and 150 arable land, divided into fields of convenient sizes, and all enclosed with good fences. One hundred acres or more, and the improvements, will be sold at a fair price, if preferred by a purchaser, as it can be conveniently divided.

The improvements consist of a neat and convenient house, kitchen, and wash house attached, ice-house, tenant house, barn, hay house, stables, carriage house, sheds for cattle, sheds for carts and tools, corn crib, poultry yard, and other structures necessary to a large farm. The buildings are nearly new and in good order. Good water at the house, at the stables, and also in the fields. A garden near the house, and a beautiful sloping lawn in front of the house, well filled with trees; also two young Apple Orchards, a Peach Orchard of 2000 trees that will be in full bearing next season; Cherries, Plums, and a large variety of Pears. The fruit trees are of the finest varieties, selected with great care.

Price, $75 per acre. Part of the purchase money may remain on mortgage.

Apply to GARRET S. CANNON, Esq., at Bordentown, N. J., or WM. H GATZMER, at Philadelphia, foot of Walnut-st.

Nov. 1, 1847—1t.

AMERICAN EGG HATCHING MACHINE.

Patented Feb. 20, 1846.

AFTER 15 months of practical demonstration, the subscriber is enabled to present the above machine to the public with confidence, as an auxiliary to the wants of the farm-house. It is so simple in its construction and management, that a child can in a short time superintend its operations, with about an hour's attention during the day; and it requires no care after bed-time. Alcohol, or other high wines, is found to be the *cheapest* and cleanest fuel, and by repeated trials, the average expense of this kind of fuel does not exceed a quarter of a cent an egg, for the full term of twenty-one days. The chickens produced are healthy and strong, and their fine appearance has been the subject of general remark, among the many visitors (now) attending Saratoga. Full printed directions and explanations accompany each machine. The machines are durable, and can be sent with safety through any of the ordinary channels of conveyance.

PRICES.

No, 1, containing between 250 and 300 eggs,.. $20 00
" 2, " " 500 and 600 " .. 30 00
" 3, " " 800 and 1000 " .. 40 00

☞ Rights for towns, counties, or states, will be disposed of on very reasonable terms.

Reference, Editors of Cultivator. L. G. HOFFMAN.

Albany, Nov. 1, 1847—2t.

I. T. GRANT & CO'S PATENT PREMIUM FAN MILLS.

THE subscribers, manufacturers of these celebrated mills, having enlarged their manufacturing establishment, hope to be enabled hereafter to supply promptly the rapidly increasing demand for that article. Their Fan-mills have taken the *first premium* at four of the New-York State Agricultural Fairs, at the State Fairs in Pennsylvania and Maryland, at the Fair of the American Institute, and at a large number of County Fairs, and secured the highest consideration at the great National Fair, at the city of Washington. They have been repeatedly tried, and the principle upon which they operate thoroughly tested by committees appointed for that purpose, and in every instance have been declared *superior* to any that have come in competition with them. They have never been awarded the *second premium*, and are the only mills manufactured, that will chaff and screen wheat perfectly clean (and at the rate of one bushel per minute) at one operation, taking out the chess, cockle and *smut* at the same time. They will also thoroughly clean *rice*, and all kinds of grain and seeds by running it through once.

The materials, workmanship, and finish of these mills are superior to any in market. The bearings are all turned and finished so that a boy can turn them with perfect ease. We manufacture four sizes, (with seven sieves to each mill,) varying in price in proportion to size, and warrant them superior to any now in use.

We also manufacture very superior *Grain Cradles*, which have taken the first premiums wherever exhibited.

Our Fan Mills and Cradles are for sale at the following places:
John Mayher & Co., 195 Front-st., New-York.
E. Whitman, 55 Light-st., Baltimore.
Denslow & Webster, Savannah, Georgia.
Fitzhugh Coyle, Washington City.
J. W. Howes, Montpelier Vt.
Luther Tucker, 10 & 12 Green-st., Albany, N.Y.
H. Warren, Troy.

I. T. GRANT & Co.

Junction P. O., Renss. Co., N. Y., Sept 1, 1847.—4t.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

A. SAUL & Co., (successors to A. J. Downing & Co.,) beg leave to inform the patrons of this establishment and the public in general, that their stock of FRUIT TREES for sale for autumn planting, is full and complete, comprising all that is choice and rare of recent introduction, as well as a full and large assortment of all the leading standard varieties.

Their stock of ORNAMENTAL TREES being unusually large, &c., they would particularly call public attention to their stock of the following species, as being extra fine:

EVERGREENS.

Astrian Pines,
Scotch do.,
Weymouth do.,
Balsam Fir.
European Silver Fir,
Norway Spruce,
Junipers—varieties,
Arbor Vitæ, do.
Yews, &c., &c.

DECIDUOUS ORNAMENTAL TREES

Horse Chestnut, Red,
—— White,
—— Yellow,
Maple, Sugar,
—— Silver leaved,
—— Scarlet,
—— Norway,
—— English cork-barked,
Ailanthus,
Catalpa,
Weeping Ash,
European do.,
American do.,
Kentucky Coffee,
Tulip Tree,
European Larch,
Cucumber Magnolia,
Umbrella do.
Oriental Sycamore,
European Mountain Ash,
Willow-leaved Oak,
Weeping Willows,
European Linden,
Southern Cypress,
American Elm,
Scotch Wytch do.
English do.
" Cork-barked do.

American Arbor Vitæ, for screens.

Also Hawthorn, Buckthorn, and Privet Plants, together with a splendid stock of Osage Orange Plants for hedges.

A choice collection of Green-house Plants for sale in one lot or in parcels; for particulars see Horticulturist for September.

Catalogues sent gratis to post-paid applicants.

Highland Nurseries, Newburgh, Oct. 1, 1847.—2t.

10,000 Copies in Four Months.

COLE'S AMERICAN VETERINARIAN,

OR Diseases of Domestic Animals, showing the Causes, Symptoms, and Remedies, and rules for restoring and preserving health by good management, with full directions for Training and Breeding, by S. W. COLE, Esq.

This is emphatically a book for every farmer, and no farmer's library is complete without it. The demand for TEN THOUSAND COPIES in the short space of four months, speaks volumes in favor of the work. The farmer has in this neat and compact volume, a complete ENCYCLOPEDIA, in which he may find the whole subject of the Treatment of Domestic Animals, familiarly discussed, and rules and remedies fully and clearly prescribed.

Highly recommendatory notices have been received from many of the most distinguished Farmers and Editors in the country. The following short extracts show in what estimation the work is held.

[From Ex-Governor Hill of N. H.]

"Mr. Cole has shown himself well qualified for the compilation of this work. We understand that it has already had a free and extended sale; many times its price to almost any farmer, may be saved in its purchase."

[From J. M. Weeks, of Vermont.]

"The American Veterinarian is the best book of the kind I have ever seen. Every Farmer ought to have one."

[Christian Mirror, Portland.]

"We think no farmer would willingly be without this book after glancing at the Table of Contents."

[Albany Cultivator.]

"This will be found a useful book. It speaks of diseases under the names by which they are known in this country, and the remedies prescribed are generally within the reach of every farmer, and may frequently be found on his own farm. We second the suggestion that it should be in the hands of every farmer."

[American Agriculturist.]

"We recommend to all who keep Domestic Animals to procure Mr. Cole's new book. The lives of many valuable animals might be saved by following his directions."

The price of this valuable book, finely bound in leather, is 50 cents.

WANTED—50 active, intelligent, and enterprising agents, to sell this work, two in each State in the Union. A small capital of from $25 to $50, will be necessary for each Agent. Address, POST-PAID, the publishers. JOHN P. JEWETT & Co.

October 1—3t. 23 Cornhill, Booksellers' Row, Boston.

FINE WOOLED BUCKS.

THE subscriber has for sale thirty superior Bucks. one and two years of age, of good size and form, raised from fine heavy fleeced ewes. of the Saxon and Merino varieties. These Bucks were got by Green Mountain Hero, whose last fleece weighed 10 lbs. 8 oz., thoroughly washed under a waterfall. The quality of his wool, as tested by sorting at the factory, was as follows:

Extra,	4 lbs.	3 oz.	3d quality	1 lb.	6 oz.
1st quality	1 "	13 "	4th "	0 "	10 "
2d "	1 "	4 "	5th "	1 "	2 "

These Bucks are numbered, and the subscriber has a record of the weight of their fleeces, also samples of wool from most of their fleeces. EBENEZER SMITH.

Middlefield, Hampshire co., Mass., Sept. 7, 1847—2t.*

GENEVA AGR'L FOUNDRY AND SHOPS.

THE subscriber has recently put in operation a new FOUNDRY AND MACHINE SHOP, intended chiefly for the manufacture of AGRICULTURAL IMPLEMENTS. A number of valuable improvements in various farming tools having been made and patented by his predecessor, (T. D. Burrall,) this establishment has been erected for the manufacture of *these* and such other implements as the market may require, and in order that purchasers may depend upon a genuine and well finished article. Among other things he has now on hand

Burrall's Patent Threshing and Clover Machines and Horse Powers
" " Shell Wheel Plows, greatly improved the present season.
Burrall's Patent Corn Shellers, Nos. 1 and 2, do. do.

Also, Subsoil, Corn, and Shovel Plows, Straw Cutters, of various kinds, Scrapers, Plow Points, Trimmings, &c., &c.

He intends adding to his present stock from time to time, by selections from the best articles in market; all which will be got up in the best style, and sold, wholesale and retail, on reasonable terms.

Mill Gearing, Castings of all kinds, pattern-making, &c., &c., executed on short notice. E. J. BURRALL.

Geneva, August 1, 1847.—4t.

SPANISH MERINO SHEEP.

FOR sale a few choice Merino sheep—bucks and ewes—of undoubted purity of blood, and a quality that will give satisfaction to purchasers. They can be sent west by canal, at the subscriber's risk. R. J. JONES.

Cornwall, Vt., June 1, 1847.—tf.

PURE BRED RAMS.

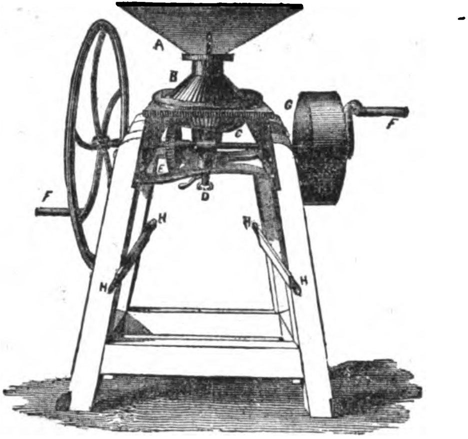
THE subscriber has a few choice rams for sale, bred from the celebrated flock of Geo. Flower Esq., of Albion, Illinois, and some from a Saxon ram imported by Henry Clay, Esq., of Ashland, Kentucky. These sheep are of fine healthy constitution, with a very fine long staple.

He has also added to his flock 20 ewes and rams, selected from the flock of Samuel Patterson, Esq., of Washington Co, Pa. These sheep are not surpassed by any in America; [see the communication of L. A. Morrell, Esq., Cultivator for Nov. 1846,] their wool having been sold last year in Northampton, Mass., at 75 cts.

He has also a few fine young Shepherds' Dogs, bred from a Scotch cully, imported by Mr. Mitchell, of Lasalle Co., Ill.

A. H. NICHOLS, Greencastle, Putnam Co., Ia.

August, 1, 1847—4t.



JOHN MAYHER & CO.'S NEW SELF-SHARPENING CORN, COFFEE, AND SPICE MILL.

THE above cut shows the construction of our Premium Mill for Grinding Corn, Oats, Coffee, Spices, &c., &c. It is considered highly valuable for its simplicity of construction. durability, and its adaptation for farmers, planters, and grocers. It may be operated by hand or horse power, and will grind from four to five bushels of good meal per hour, and from 300 to 400 lbs. of coffee or spice per hour. Price, from $28 to $30. We also have for sale a smaller mill for the same purpose, which will grind from 1½ to 2 bushels of corn per hour, and from 90 to 100 lbs. of coffee per hour. Price, from $5 to $6. JOHN MAYHER & CO.,

United States Agricultural Warehouse,
Oct. 3—1t. No. 195 Front, near Fulton-st., N. Y.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: A *very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

GRANT'S PATENT FAN MILLS.

THE right to manufacture these celebrated mills can be obtained of the subscriber, at Junction P. O., Rensselaer Co., N. York. He also gives notice that he shall prosecute all persons who in any manner infringe upon his patent. I. T. GRANT

Junction P. O., Rens. Co., N. Y., Sept. 1, 1847—4t.

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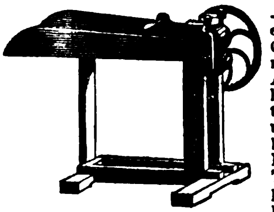
HAY AND STRAW CUTTERS.



A LARGE supply of Stevens', Hovey's, and Towers' Cylinder Hay and Straw Cutters, constantly on hand at manufacturers' prices, at the Albany Agricultural Warehouse. When farmers learn the benefits to be derived from using cut feed, they will not be without a good machine.—Mr. A. Burlingame, of South Trenton, N. Y., used one the past season, and the value he places upon its use is found in the following extract from a communication from him:—"With less hay to begin the winter, and thirty cows and four horses (in all 100 head) more than the year before, he saved over from five to seven tons of good hay, while the year before he was entirely out before grass came." The greatest saving is in using up all parts and kinds of feed, instead of running to waste. For sale at the Albany Ag. Warehouse, Nos. 10 and 12 Green-st..

L. TUCKER.

N. B. Descriptive Catalogues gratis, on application at the store, or by mail, post-paid.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES, FLUSHING.

WM. R. PRINCE & Co., successors of Wm. Prince, and sole proprietors of his great collection of Fruit Trees, &c., have just published their *NEW DESCRIPTIVE CATALOGUES*, 36th edition, which will be sent to post-paid applicants—to purchasers gratis, and to others at $1 per sett.

TO NURSERIES.—In addition to other trees we have an immense stock of Ornamental Trees and Shrubbery, including 50,000 Evergreen Trees, suitable for Nurseries; they being of the various sizes best suited for transmission to a distance, and for forming Nursery plantations. Also, 60,000 Peaches, of choice varieties, at low rates, and 30.000 Cherries, at much reduced prices.

Nov. 1, 1847.—1t.

COOKING STOVES, &c.

THE subscribers offer for sale at low cash prices, the following Stoves, &c.:—

Mott's Air Tight Cement Ovens, 3 sizes.
" Pride of the Kitchen.
" Ring Cylinders, 3 sizes, for Bar Rooms, &c.
" Agricultural Cauldrons, from one-half barrel to four barrels, at the manufacturers' prices; Wager & Dater's Improved Air Tight, large oven, summer hearth Cooking Stoves, 5 sizes; Wager & Dater's National Air Tight Cooking Stoves, 4 sizes; Air Tight Parlorwood and coal Stoves; Sheet Iron Dumb Stoves; Parlor, Cook, and Premium Stoves. All kinds of Tin, Copper, and Sheet Iron Ware, on hand and made to order at short notice, at

VAN WORMER & McGARVEY'S,
No. 14 Green-st, Albany.

Nov. 1.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200.000 Grafted Apple Trees, from 1 to 5 years' growth, 60.000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15.000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to.

THORP & SMITH.

Syracuse, N. Y., Nov 1—6t.

RURAL PUBLICATIONS.

THE CULTIVATOR, a monthly journal of Agriculture, Horticulture, and Domestic Economy, published at Albany, N. Y., by Luther Tucker. Single copies $1 a year. To Clubs or Agents, seven copies for $5—Fifteen copies for $10, and at the rate of three copies for $2, for all over 15 copies. This work has now been published fourteen years, with a constantly increasing popularity among the farmers of every part of the United States. The volume for 1848, will commence on the 1st of January, at which time all subscriptions for the year should commence.

THE HORTICULTURIST, *and Journal of Rural Art and Rural Taste*, a monthly magazine, edited by A. J. DOWNING. Esq., of Newburgh, well known as the author of "Landscape Gardening." "Cottage Residences," "Fruits and Fruit Trees of America," &c., and published at Albany, by Luther Tucker.—price, $3 a year—20 per cent. discount to Agents. The first vol. of this work was completed with the June number for 1847, and with the back numbers of the 2d vol., now in course of publication, can be furnished to all new subscribers. The Horticulturist embraces in its scope, the Description and Cultivation of Fruits and Fruit Trees, Ornamental Trees, Shrubs and Plants—Designs for Rural Cottages, Farm Houses, Lodges, Ice Houses, Vineries, &c.,—Landscape and Ornamental Gardening, and all matters of interest to the horticulturist, and should be in the hands of all who desire to enrich and beautify their residences by the comforts and adornments of rural art and rural taste.

Postmasters and others having a taste for rural pursuits, and disposed to aid in circulating correct information upon rural subjects, are invited to act as Agents for the above publications. All letters to be addressed to LUTHER TUCKER, Publisher, Albany, N. Y.

BURBANK, OR MORGAN CHIEF.

I HAVE on hand and will sell, a stallion horse, known by the above name. He is of a beautiful chestnut color, 15 years old, sound and smooth as a colt—weighing 1050 lbs. He was raised by Peter Burbank, Esq., of Wells River, and was got by "Old Woodbury or Burbank Morgan," owned at one time by Mr. Burbank. His dam was a Morgan mare known by the name of "Empress" and owned also by Mr. Burbank.

His sire and dam were both got by the original Justin Morgan horse, making him the highest Morgan blood stallion known to be living excepting "Old Gifford" Burbank or Morgan Chief, was sold by Mr. Burbank's administrator to B. Latham, of Lyme, N. H. when a yearling, for $150, and by him kept until May, 1843, when he was repurchased and taken back to Wells River, and there remained until the present season. He has proved a sure foal getter and an excellent stock horse. He is the sire of the fast trotting chestnut mare, belonging to W. S. Marland, of Andover, Mass., for which he has refused $500; also the chestnut gelding sold in Boston, by Pushee of Lebanon, in the spring of 1846, for $500, and now kept at the Devonshire stable, and many other valuable and high selling horses. He is a kind, valuable driving horse in all harness, is afraid of nothing, and is perfectly manageable by any person.

C. BLODGETT.

Chelsea, Orange Co., Vt., Oct. 8th, 1847.—1t.*

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

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THE CULTIVATOR.
N. ORR sc.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

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SKETCHES OF MASSACHUSETTS FARMING

DURING a short excursion to Massachusetts, in the month of October last, we had a better opportunity of seeing a portion of the valley of the Connecticut river north of Springfield, than we ever had before. Having attended the cattle-shows at Pittsfield and Springfield, we spent a few days very pleasantly in visiting some of the farms from Springfield to Greenfield; and after being present at the show at Northampton, we passed down the river and attended that at Hartford, Ct.

CULTIVATION WITHOUT FENCES.—The attention of a person not acquainted with the customs of Massachusetts, is attracted by the large amount of land in some neighborhoods, lying as "commons," or unfenced. Along the Connecticut, between the intervale or "meadows" and the hills, on each side of the river, there are tracts varying from two to six or eight miles in width, called *plains*. The soil is sandy, but varies in lightness from that which is blown about by winds to that which is called sandy loam. The natural growth varies with the soil, being in some instances only scrub-oak and small bushes, in others white and pitch pine, and in others chestnut, and other hard-wood trees. A large portion of this land is unenclosed, yet there are thousands of acres under cultivation, and some of it produces fair crops of rye, Indian corn, buckwheat, and potatoes. A law of the state prohibits live-stock of all kinds from running at large; and so strictly is the law observed, that not an animal is seen in the highway unless under the care of a keeper; and crops grown on the commons are considered equally as safe as though they were surrounded by the best fences. We passed many pieces of corn and other crops, which had received no injury, and it was evident that none was feared.

Heretofore this plain land has not been deemed of much value. Until within a few years, that which was situated not more than two or three miles from the principal business street in Springfield, could have been bought at from three to five dollars per acre. But latterly it has been found that under suitable management this land may be greatly improved, and that by proper cultivation it will afford good profits. Its value is therefore now reckoned higher by a hundred or two hundred per cent. than it was ten years ago.

Mr. **HORATIO SARGENT**, of Springfield, and other owners of this land, have been successful in its improvement. That which is in its natural state, or which has not been cropped, is most readily brought into profitable condition. The trees or bushes are cut off, the land plowed and got into clover as soon as possible. Plaster is sown on the clover at the rate of from sixty to a hundred and twenty pounds per acre. The clover is mowed or pastured the first year, and the second year the principal part of the growth is left on the ground—the land plowed and sowed to rye, or left till the following spring and planted to corn or potatoes. After one or two crops have been taken, it is again put in clover, a dressing of plaster given, and the clover continued as long as it produces well. Sometimes grass seeds are sown, and the land pastured for several years. By this course it is found that the land does not deteriorate, and by the addition of only a light dressing of manure when it is plowed, it actually improves.

Land of this kind which has formerly been cropped, and called worn out, is rapidly improved by manure, ashes, clover, and plaster. Considerable of it has been brought up in this way. It is found best, we were told, to apply the manure in the form of well rotted compost, and to spread it evenly over the surface, and only cover it slightly. If animal manure is applied in an unfermented state, it seems to "burn away," and render the soil dry without doing much good. But when made into compost, and applied as above-mentioned, it rather attracts moisture, and renders the soil more cohesive.

CULTIVATION OF TOBACCO.—The culture of tobacco in the valley of the Connecticut, has, within a few years, become an object of considerable importance. The variety here produced is known in the market as "Connecticut Seed-Leaf," and it usually brings double the price, or more, of the tobacco grown in Virginia or Kentucky. To give a profitable crop it requires pretty rich land—though the sandy soils, manured at the rate of ten to twenty common two-horse or ox loads per acre, produce well. With good management the usual yield is from 1,500 to 2,000 pounds per acre, of marketable tobacco, and the average price may be said to be seven to eight cents per pound.

Mr. **SARGENT**, of Springfield, and Messrs. **WELLS** and **PAOLI LATHROP**, of South Hadley, are considerably engaged in the tobacco culture. The former had seventeen acres the past season. At the above rates of yield and price, which it will probably equal, it will give an average return of $105 to $160 per acre.

With the course that is here pursued, tobacco is by no means an injurious crop to the soil; on the contrary it is found to be an ameliorating one. The liberal manuring and clean cultivation which it is necessary to bestow on the tobacco, fits the soil admirably for other crops; and it is found that wheat and other grains and grass flourish better where tobacco forms a part of the rotation, than where that plant is not cultivated. Messrs. **LATHROP** mentioned an instance of their having put $36 worth of manure on an acre and a hundred rods of land, which they planted with tobacco. They got a ton of tobacco, which sold for $160. Then sowed the land to wheat and got 30 bushels. The next crop was hay, and gave, at two cuttings, four tons

The stalks of tobacco, after the leaves have been taken off, are scattered over the ground and plowed in, or placed in the manure heap to rot. It is thought they possess considerable fertilizing properties. It is known that the ashes from them contain a large proportion of potash. We are told that where two or three stalks are left on grass-ground, their effect is very visible in the rank growth of the grass around.*

Farms.—Mr. Sargent's farm consists of several detached pieces. He has only some eight or ten acres about his residence, and this is becoming too valuable for building lots to be cultivated. About a mile up the river he has 63 acres of excellent intervale. Besides this he has about 40 acres of "plain," which he is improving to great advantage, and a tract of 40 to 50 acres of pasturage at East Longmeadow. The crops cultivated on the river land are chiefly tobacco (of which we have spoken above,) and Indian corn. He usually obtains from 60 to 70 bushels of corn per acre; has raised 88 bushels per acre. He devotes his pastures considerably to grazing stock for beef. He has eight three-year-old steers designed for slaughter this winter. They were in high order when we saw them, though only grass-fed. It was thought they would weigh an average of 800 lbs. dressed. Three or four of them had considerable Durham blood, and were really fine animals; $50 per head had already been offered for them.

B. B. Belcher, Esq., has a fine situation at Chickopee Falls,—a thriving manufacturing village of about 2000 inhabitants. Mr. B.'s buildings are new, and in their situation and construction he has shown much good judgment as well as good taste. The house commands a pleasant view of the village and neighborhood. His garden, though yet too new to appear to the best advantage, is prettily laid out and handsomely ornamented with trees, shrubbery, and flowers. His farm consists of about 70 acres, and is mostly devoted to the keeping of cows for the purpose of selling milk. His barn is one of the best planned and thoroughly built that we have anywhere met with. It is 78 feet long by 44 wide, with posts 23 feet high. It is divided into two stories—the first ten feet high, and the second thirteen feet to the eaves. The cattle are kept in the lower story. The floorway is on the second story. On one side of the floorway, the bay extends to the bottom of the first story. The barn will hold 100 tons of hay, and that quantity is usually cut on the farm. At one end of the basement story there is a cellar in which vegetables are stored for feeding stock in winter. Carrots are preferred for cows. He keeps fifteen cows, besides other stock. The cows average six quarts of milk per day, beer measure, the year round. The milk is sold at four cents per quart in summer, and five in winter. The farm is kept chiefly in grass, and when it becomes necessary to break up the sward, it is done in autumn, and immediately sown again to grass on the furrow. A large portion of the farm is naturally rather a light sandy soil, though most of it is moist, and under Mr. B.'s management produces excellent crops of grass. Hay is commonly worth here $12 per ton.

Mr. B.'s cows are a good lot. Among them are several full blood Durhams from the herd of Messrs. Lathrop, of South Hadley. One of these, four years old, carried the first premium at the show at Springfield. Some of his cows of mixed blood have very good forms, and look like first rate milkers. His swine are of the Mackay breed, and some of them are fine ones, but the stock has apparently degenerated by too close breeding.

Messrs. Abel and Sumner Chapin, of Chickopee, have about 70 acres in their home farm, situated on the river, and 200 acres at Ludlow, six miles distant, besides some other out lands. This farm has long been one of considerable note. The father of the present owners, Col. Abel Chapin, was a distinguished farmer, quite famous for rearing cattle of extraordinary size and fatness. He bred and reared the celebrated oxen Magnus and Maximus, which took the prizes of the Mass. So. for Promoting Agriculture, at the Brighton show, in 1817, and were considered the most extraordinary cattle which had been reared in the country. Their weight was upwards of 2000 lbs. each, dressed. The year following Col. C. exhibited another ox at Brighton, which weighed alive 2,784 lbs. These oxen were descended from the "Gore bull," presented in 1792, by the late Charles Vaughan, Esq., of Maine, to Governor Gore, of Massachusetts. Messrs. Chapin have now one cow and some of her offspring which show the blood and points of the above stock in a striking manner. They have several large and thrifty steers and young oxen, among which were a pair of full-blood Durhams, three years old, from the herd of Messrs. Lathrop, that are really fine.

Chester W. Chapin, Chickopee, has a farm of about 200 acres of excellent land, lying mostly on the river. He keeps twenty cows, the milk from which is sold at Cabotville. The cows are in general superior.

They are of various blood, though none are claimed as "native." Some are a mixture of the "Phœnix stock," as it is called, (which we shall describe in another place,) mixed with the Durham; and some are half Ayrshire. But taking them all together we are not certain that we ever saw a lot of the same number, which would surpass them in general appearance. —regard being had to all points which indicate a *profitable* cow.

Messrs. Wells & Paoli Lathrop, of South-Hadley, have a farm of 187 acres. It is within half a mile of the falls in the Connecticut, where a dam is soon to be built for the purpose of obtaining a large water-power —a power which it is calculated will be nearly four times greater than that of Lowell. The work has been commenced and is rapidly progressing, and it is expected that in the space of a few years a city will here rise that will number its inhabitants by tens of thousands. The enterprise has already had the effect to enhance the value of real estate in the neighborhood.

Messrs. Lathrop purchased this farm in 1833, at the low price of $5,600 It was supposed to be "run out," and only yielded thirty tons of hay annually. The highest estimate of its capabilities by its former owner, was, that it would keep twenty-five cows, if devoted wholly to that purpose. Messrs. L. have so increased its production that for the last ten years it has averaged a hundred tons of hay yearly, and supported from thirty-seven to forty head of cattle, with three or four horses. This improvement has been produced by no extraordinary expenditure. The first start was given by the application of plaster.

A considerable part of the farm consists of hills and knolls—frequently rather steep—which seem to have been formed by the abrasion or washing away of portions of the elevated plain to which the whole tract originally belonged. It is evidently an alluvial formation, though much older than the present "intervale."

The strata composing this plain are various in composition. A large portion of the surface, as we have mentioned in the first part of our article, is sandy, but it is underlayed, at various depths, by strata of an argillaceous character. In some places, as on the sides of such hills as we have described, these strata crop out and form the surface soil. In all such situations, the effects of plaster are almost wonderful. Messrs. L. state that when they purchased their farm, the grass on nearly the whole of it was thin and of poor quality. The hilly portion of it was pastured, but the stock obtained only a scanty supply of "mouse-ear and poverty-grass." The application of about two bushels, or a hundred and twenty pounds of plaster per acre, soon changed the character of the herbage, and the barren hills became the finest grazing lands. Since the first application of plaster, an annual dressing of about sixty pounds per acre has been given; and this is all the land has received, in the shape of manure except what has been dropped by animals while being kept on it. The production of feed has been remarkable, and there is still no diminution, but rather an increase in its quantity. It is chiefly spire-grass, or "Kentucky blue-grass," (*Poa pratensis*,) and white clover, and is very sweet and nutritive. We have seldom seen pastures that would carry more stock per acre. The best part of them will support a cow per acre.

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* For an account of the mode of cultivating tobacco as here practiced, see Cultivator for 1844, page 89.

We were told of other instances, equally striking, of the effects of plaster on similar soil. Mr. Josiah Bardwell, of South-Hadley, for several seasons summered a horse, a yoke of oxen, two cows, and a heifer, on four acres and three-quarters. He had nine acres and a half of meadow, from which he cut one year, at two cuttings, thirty-seven tons of hay. The pasture had a dressing of plaster, and nothing else, every year—the meadow had some additional manure.*

Messrs. Lathrop were able at once, by the use of plaster, to stock their farm heavily. Of course they were soon provided with a large amount of manure, which being applied to the portion of the farm on which a rotation of crops was followed, in a short time raised it to a high state of fertility and productiveness.

We leave to others—for the present, at least, the consideration of particular causes which have produced the remarkable effects of plaster in the cases above cited.

Live Stock.—Messrs. L. have had for several years a herd of Improved Short-Horns. They have a less number at this time than they have formerly kept. Some of their animals are of the first quality—especially two cows, *Butter-cup* and *Young Lilac*.—They have fine constitutions, excellent symmetry, and good fattening tendency, with fair indications of dairy qualities. Their dam, *Louisa*, now owned by Mr. Porter, of Berlin, Ct., was an extraordinary butter cow. She and *Lucilla*, now owned by J. F. Sheafe, Esq., Dutchess County, were tried in June, 1843, and they made each fourteen pounds eight ounces of butter per week. They were tried again in October following, and averaged nine pounds ten ounces per week.

Messrs. L. are rearing a flock of South Down sheep,—have now about forty head. They are in general well-shaped, and appear healthy and thrifty.

Messrs. L.'s swine are of the Mackay breed. They have had the stock for several years, but have necessarily been restricted to the progeny of but few animals in their selection of breeders, and have been obliged to breed from nearer affinities of blood than would have been desirable. From this, as it is thought, the stock is not as prolific as formerly, and not on the average as good. The breed has been of great advantage to the neighborhood. We saw a number of half and three-fourths bloods, from Messrs. L.'s boar, which were first rate hogs. Messrs. L. now propose to make one cross with a Suffolk boar, and breed back the progeny to the Mackay boar.

Mr. Alonzo Lamb has a farm adjoining that of Messrs. Lathrop, on the south. He has 150 acres here and 150 in out-lands. Most of the land is of superior quality. He has some superior stock. In 1837, he, in connexion with Messrs. Lathrop, bought cattle of Hon. John Welles, of Boston. They were of mixed blood, but chiefly Durham, crossed more or less with Hereford. Mr. Lamb has two or three fine cows that were bred by Mr. Welles, and he has several large and well-formed steers. We had but little opportunity to examine his farm.

We shall continue our sketches next month.

High Cultivation.—In the Hudson river, just below Albany, is Van Rensselaer's island, containing about 160 acres, which for 150 years has been cultivated mostly as a kitchen garden. It is at present occupied by eight tenants, most of whom reside here in summer, but generally remove in the fall or fore part of winter, in order to avoid the freshets which in spring lay the island under water to the depth of from four to ten feet. In consequence of the liability to inundation, no buildings are erected here but those of a cheap and temporary character. It is frequently late in the season before the waters subside sufficiently to admit cultivation, but from the fertility of the soil and its favorable exposure, the growth of vegetation is very rapid, and most articles are obtained here earlier than anywhere else in the vicinity, if grown without artificial heat.

This island rents for ten to eighteen dollars per acre, some parts being considered more valuable than others. Its products are probably worth from twelve to fifteen thousand dollars annually. Some instances of cultivation show a product, which if equalled on the whole island, would give a much greater aggregate.

Mr. C. Bates has occupied eighteen acres for fourteen years, and his products have amounted to $2,500 to $3,000 per year. Some of his crops are very heavy. Cabbages, for instance, are set about 2½ by 2 feet apart, which permits 8,712 plants per acre. An average price of the article may be considered three cents per head, which, if the ground was fully occupied, would give $261.36 per acre. Mr. B. once sold a half acre of cabbage on the ground, for $145. He has this season about four acres in cabbage. It is difficult to tell what is the average yield per acre of different articles, as many of them are taken up while they are growing, and at first while quite small. Mr. B. however, is confident that beets will average from 800 to 1000 bushels per acre, and carrots, he thinks will average 1,200 bushels. He measured one season, the product of several rods which yielded at the rate of 1,600 bushels per acre. He raises carrots, not only for market, but for feeding his horses. His testimony in regard to their value for this purpose agrees with that of most others who have tried them. A peck to a half bushel per day, for each horse, produces an excellent effect, especially towards the latter part of winter, when it is wished to start the coat of the animal.

Book Farming.—The Ohio Cultivator, speaking of the importation of fine cheese into Northern Ohio, from Hamburgh, in western New-York, says, "During our connexion with the Genesee Farmer, there were more subscribers for that paper in the single town of "Hamburgh," than there are for the Ohio Cultivator in one or two *whole counties* in the dairy region of the Reserve."

Tomato.—It appears by a communication of E. Whittlesey, published two years since in the Western Reserve Magazine, that the tomato has been used in some parts of Illinois, and in the neighborhood of Vincennes, for more than fifty years.

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* See an account in the Cultivator, p. 30, for 1846, of the effects of plaster on Mr. Chapin's farm, in Springfield.

PRINCIPLES OF BREEDING.

[In our December number for last year, p. 374, 375, we published from the *Journal of the Royal Agricultural Society*, a portion of an essay by John Wright, on the points which Short-Horn cattle should possess to render them in the greatest degree valuable. The other portions of the essay, relating chiefly to the breeding of stock, we could not at that time make room for, though they are of a very important character. Believing that the subject is interesting to our readers, at least to those of them who are engaged in stock-growing, we present the following abstract. We have appended, as will be seen, a few notes, to which, in connection with the remarks of Mr. Wright, attention is invited.—Eds.]

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It has been attempted to point out a difference between the Durhams, Short-Horns, and Improved Short-Horns: these minute distinctions I will not attempt to define, nor will I stop to inquire how long the counties of Northumberland, Durham, Yorkshire, and Lincolnshire have had a breed of Short-Horned cattle; but certain it is that great pains were taken by Mr. Charles Colling, of Ketton, in the county of Durham, to select animals possessing feeding properties in a high degree, and under his auspices a race of animals was presented to us which may justly be entitled to the appellation of 'Improved Short-Horns;' and it is of this breed of cattle I wish more particularly to speak. They have been called the Durham breed and the Ketton breed: this appears to have arisen from the circumstance that there were two prints published of Mr. Charles Colling's ox that travelled for show, in one of which he is called the Durham ox, and in the other the Ketton ox. It should be remembered that some of the most important selections to improve this breed, were made from herds on the Yorkshire side of the river Tees.

Skeptical persons there are who lay great emphasis on the want of improvement in the Short-Horns of the present day: this may with some degree of truth be admitted, if taken in comparison with the Ketton herd; but surely there is a manifest improvement in the general breed of Short-Horns throughout the kingdom, and a vast increase in numbers. At Mr. C. Colling's sale in 1810, few persons bought both male and female, so as to enable them to continue the same precise blood: consequently the purchaser of one animal only, had to put him or her to such stock as he previously possessed, thereby improving the progeny of his own, but deteriorating that of the purchase; so that the produce was inferior to the original Ketton beast, and might require several judicious crosses to raise them to the original standard. It is a rare occurrence to find a healthy herd of pure and close descent from the Ketton breed. Assuming, then, that the Short-Horns have never equalled the perfection in which they were presented to us by Mr. C. Colling, it behooves us to ascertain the means he used to accomplish so desirable an object, and to apply ourselves assiduously to follow his example. (*a.*)

A brief account of the Ketton herd of Short-Horns may be acceptable to those who never had the opportunity of seeing them. They were of great size and substance, with fine long hind quarters; the space from the hip to the rib was long; but the evils attendant on an extreme length in this part were counteracted by a broad back and high round ribs; the shoulders of the males were upright, and the knuckles or shoulder-points were large and coarse, but that defect was not so apparent in the females; the general contour or side view was stately and imposing, but their great superiority consisted in their extraordinary inclination to fatten. On handling, the skin was very loose and pliant, and the feel under it was remarkably mellow and kind. Mr. C. Colling was distinguished above all other breeders of his day by a peculiarly fine discriminating touch, which enabled him to judge of the quality of the flesh and the tendency to fatten, to which, in connection with good judgment in other respects, his superiority and success as a breeder were mainly attributable. The color of the Ketton Short-Horn varied greatly—red, red and white, roan, and also white being found in the same kindred.

In breeding Short-Horns, many persons whose opinions are entitled to great deference, tell us that we should breed from such only as in themselves are perfect: this, however plausible in theory, will be found untenable in practice; for it may be asked, where do you find the first parents? A perfect and uniform-shaped beast, that lays its fat on every point in equal proportions, is highly desirable, so as to have no excess in one point to the disproportion of another; and in our endeavors to accomplish this desirable object we should first become acquainted with the defective points in the female, and then select a male possessing those points in great perfection, and thereby insure an improvement in their progeny: upon this principle hangs all the necessary knowledge for improving the shape of animals; but in all our selections we must never lose sight of *inclination to fatten*—the prominent feature of the Short-Horns.

In-and-in Breeding.—From the vast superiority of the Ketton Short-Horns, and the desire to perpetuate them with pure pedigrees, persons have been induced to breed from animals of close affinity of blood; being conscious they could not resort to other families without employing inferior animals, and thereby impairing the properties of their own herd. Various degrees of success have attended this course. There are several instances of superior animals bred in the closest affinity, whilst in the great majority of cases the failure has been extensive and lamentable. * * * The writer's opposition to this principle of breeding in-and-in, proceeds from having witnessed so many serious losses in herds so allied, which, previous to the affinity of blood, were healthy and strong constitutioned. In the early Short-Horns no hoosing or cough, no delicacy of constitution was known; but as affinity of breeding progressed, a delicacy of constitution accompanied it. It has often been exultingly said that Comet was the finest bull of his day, and at the same time had the greatest affinity of blood of any animal we had: this is a truth which cannot be denied, but it might be an exception, and not the rule. It was notorious that the stock got by him out of cows that were strangers in blood, was far superior to such as were more nearly akin. It will be remembered that Comet had a deformed shoulder: who can say that this did not proceed from close affinity in the parents? In the human frame, it is a very common thing to see deformed shoulders proceed from disordered lungs.

In the Short-Horns of close affinity of blood, how many bulls do we find with lame shoulders, how many called cripples, and how many cripples in reality that never met the public eye? We see no other race of animals with this defect, except those Short-Horns bred in-and-in. It has been said that this disease might arise through breeding from animals of bad constitution, and thus perpetuate the disease in their offspring; but when we find this disease originated and prevailing in the same family after repeated crossing in-and-in, though unknown in their ancestors, it is a fair presumption that this practice is inimical to the constitution. * * * Mr. Mason, of Chilton, commenced breeding Short-Horns from the same parents as Mr. C. Colling, and for a certain period pursued it very successfully; but being deprived of the privilege of sending his cows to the Ketton bulls, he was constrained to use those of his own breeding, and the losses he sustained in his young stock were so great that at one time his show cows were reduced to four; but by using the bull Jupiter, whose affinity of blood was supposed to be remote, he again became a successful breeder. Many other herds might be quoted in support of this opinion.

Among the breeders of poultry, there are few who do not know that when the young ones become tender and difficult to rear, the remedy is found in procuring a change of the male bird. Mr. William Clark, of Shincliff, whose fighting cocks were so notorious, continued to breed from his own kind till they lost their disposition to fight, and stood to be cut up without making any resistance, and were so reduced in size as to be under those weights required for the best prizes; but on obtaining a cross from Mr. Leighton, they again resumed their former courage and weights. In the numerous trials afforded him, he found those that were bred from a hen and her male chicken, were the heaviest cocks and the best fighters; those from a cock and hen of the same brood the reverse. (*b*)

In pigs, the writer's experience was considerable in breeding from three or four sows at the same time, all descended from the same parents, boar and sow: those were put to the same boar for seven descents or generations; the result was that in many instances they failed to breed; in others they bred few that lived; many of them were idiots—had not sense to suck; and when attempting to walk they could not go straight. The best two sows of this breed were sent to other boars, and produced several litters of healthy pigs. In justice to the advocates of the in-and-in principle, it is but right to state, that the *best* sow during the seven generations was one of the last descent—she was the only pig of that litter. She would not breed to her sire, but bred to a stranger in blood at the first trial. She possessed great substance and constitution, and was a very superior animal. Superior animals bred in that way may be occasionally met with, but this falls far short of proving the system to be good. (*c*.)

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NOTES.—*a*. It is well to notice that Mr. WRIGHT declares it was under the auspices of Mr. CHARLES COLLING that the Short-Horns obtained so high a degree of perfection as to be "justly entitled to the appellation of *improved* Short-Horns." This appears to be the view generally taken in regard to the subject in England, though we believe it has been asserted in one or two instances, that Mr. COLLING "*bought* better Short-Horns than he ever bred," and that the breed, or certain families of it, had, more than *two hundred years ago*, reached a degree of excellence which has not since been exceeded!

b. It is necessary to observe particularly what Mr. WRIGHT considers in-and-in breeding. It is evident that he does not intend to argue against breeding from animals which have some affinity of blood; for in the case of the fighting cocks which he cites, the best fighters and the largest fowls are said to have been produced by breeding a hen to one of her own male offspring. This would, at all events, produce a stock having three-quarters the blood of the mother. But those bred from a cock and hen of the same brood, were the worst stock. These were of precisely the same blood, and of course were bred strictly in-and-in.

He mentions that Mr. MASON's stock degenerated on account of his using only bulls of his own herd. But we think the mere statement of this circumstance is hardly sufficient to account for the degeneracy. Mr. Colling, it has been stated, used no bulls for several generations but those of his own breeding; yet his cattle, with a few exceptions, rather improved than degenerated. JOHN ROOKE, in a letter dated June 2d, 1821, published in the *London Farmer's Journal*, speaks of the celebrated bulls Foljambe, Lord Bolingbroke, Favorite, and Comet, and adds—"What places Mr. Colling in a high point of view, is the fact that he was the breeder of the whole line of these eminent bulls from Hubback, *without being indebted to any other person for a sire*." Both of these celebrated breeders used bulls of their own breeding, and the different results are probably to be explained by the fact that Mr. COLLING's stock was originally more varied in blood, and that from the larger size of his herd he had a wider range for selection. But it is not improbable that even Mr. COLLING may have carried the system of breeding from affinities too far—especially in the case of Comet, referred to by Mr. WRIGHT.

Breeding from animals of various degrees of relationship is often practiced by the best breeders, and is in many cases necessary in order to fix or continue certain important peculiarities; but care is required that both parents have not a tendency to the same defect—a caution which should be more particularly observed, when it is known that members of the same family have generally similar constitutional habits and tendencies. In an essay "On the Breeding, Feeding, and General Management of Sheep," by T. E. PAWLETT, published in the sixth volume of the *Journal of the Royal Agricultural Society*, this subject is considerably discussed. Mr. PAWLETT observes that his experience in breeding had extended through more than twenty years, and that he had bestowed close attention to the subject. He has been a very successful competitor for the prizes of the Royal Society, the Smithfield Club, &c.* He is in favor of breeding from affinities, though he says—"I do not, however, recommend that animals *closely* allied by blood should be put together generally; yet I have known very good sheep, for instance, produced by putting the son of a ram called A to the daughter of A, [that is a male and female by the same sire, but different dams.] in cases where their points would suit each other, and I should never hesitate in doing so. I cannot see the utility of crossing for the sake of crossing or changing, unless I can perceive superior qualities in another person's flock which mine does not possess; even in that case, if my neighbor's flock were not quite so well bred as my own, I should long hesitate before I had anything to do with it, as the more I see of breeding the more I am convinced of the advantages to be derived from using well-bred, indeed the best bred animals."

c. The fact is well established, that there are in families peculiar constitutional excellencies as well as defects. These are transmitted hereditarily, and the object of the breeder is to perpetuate and increase the good qualities and avoid the bad ones. This is the great point to be observed, and in reference to it the constant exercise of skill and judgment is necessary. Some degree of affinity, as before remarked, is often required to secure the points and qualities which are desired, but if the course is carried too far, it may defeat the object by unduly developing defects. Mr. WRIGHT observes that breeding in-and-in may occasionally produce a superior animal, but that this does not prove the goodness of the system. It has been remarked by others that though most animals bred in-and-in are of little value, this is, notwithstanding, the course to produce *prodigies.* A good judge of stock and successful breeder, once observed to the writer, that in-and-in breeding was sure to produce an uncommonly good or an uncommonly bad animal—the tendency would be to extremes. And it has been said in relation to the stock of a noted breeder in England, who has long practiced breeding from close affinities, that though some of his animals have possessed extraordinary excellence, a large majority of them have been precisely the reverse.

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* On looking over the list of awards, we find that Mr. PAWLETT has received from the Royal Agricultural Society, within the last seven years, eleven prizes on Leicester sheep, varying from five to twenty sovereigns each.

The London *Farmer's Journal* of Nov. 21, 1823, publishes an article signed "JOHN HALL, of Little Marshall, near Exeter, a Breeder of Sockburn Short-Horns." He attributed the impotency of Short-Horn bulls, (of which much complaint had been made in former numbers of the publication mentioned,) to "an unfortunate, obstinate perseverance in the in-and-in system of breeding," which he believed had been carried to a "most fatal extent in what were called 'Improved Short-Horns.'" He adds, also, that "the weakness of constitution, and consequent great mortality of calves, may assuredly be attributed to this cause.

Mr. YOUATT, in his work on British Cattle, (p. 377,) speaking of "catarrh or hoose," observes—"Where the system of breeding in-and-in has been carried to too great an extent, and been pursued in defiance of many a warning, hoose, perpetually occurring, difficult to remove, and degenerating into confirmed phthisis, will painfully, but somewhat too late, convince the farmer of his mistake."

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REPORTS OF COMMITTEES OF AGRICULTURAL SOCIETIES.

WE have often had it in mind to say something on the subject of reports of committees appointed to adjudge premiums at cattle shows and agricultural exhibitions. These reports are often of such a character that they afford but little satisfaction or benefit to the public. They sometimes merely state the awards in the briefest manner possible—giving only a list of the premiums and the successful competitors. The consequence is that people in general are wholly at a loss as to the reason why one article or animal has been preferred to another.

It is, or should be the design of agricultural societies to encourage excellence in the various objects for which they offer premiums; and in order that this design may be best promoted, every person should have a distinct idea of what is held to constitute excellence—that is, the qualities which the society or its acting agents would most approve, should be clearly known and understood. The people should be told plainly on what the judges form their preferences. As matters are frequently managed, the public are ignorant on this point. Different persons compete for a premium: each believes that the particular qualities of his animal or article entitle it to the preference over the others: the judges award the prize, but the reasons for their preference are never known by either the successful or unsuccessful competitors, or the public in general. Hence the judges are charged with favoritism by some, and by others the competition is looked upon as a lottery where all depends on chance.

Now all this difficulty could be obviated if the committees, in connection with the statement of their awards, would also furnish the grounds of their decisions. Should they, for instance, be called on to award premiums on cows, let them state the points and qualities which they have regarded, and show wherein the animal that has received the highest prize has been deemed superior to the others. This course would in a great degree silence murmuring, and inspire confidence, at least in the honesty of decisions.

In relation to this subject, we find some good suggestions in a late communication to the Burlington (Vt.) *Free Press*, from which we take the following extract:

"The mere award of premiums, contains nothing of interest beyond that of a personal nature. There is no element of *general* interest in a report comprising nothing more. In order that a report may be of general interest, it must contain some information of a general nature, on the subject, to which the attention of the committee is called. There must be a statement of the principles by which the committee have been guided in making the awards. Take an example. Should the Committee on Farm Implements commence their report by stating briefly and accurately, what constitutes a good plow; how the form of the plow should be varied for different kinds of plowing; what soils require furrows of peculiar inclination and depth, and what plows are best fitted for different soils, there would be something in the report of real and universal interest and value. Then the awards should follow, and the why and the wherefore of each award would be manifest to every one. Such a report would show that the members of the committee had a correct or faulty understanding of their business for the time being; and would tend more to provoke that kind of discussion among the farmers, which results in progress, than anything or all things else emanating from the society."

One cause of the brevity of reports, is the hurry and confusion which inevitably attends the meetings at which they are made. Their delivery is generally the last business which is attended to by the societies previous to adjournment; and the people, wearied and excited with the various incidents of the occasion, are desirous of hearing the "conclusion of the whole matter" in the fewest words and least time, that they may the sooner be on their way home. Under these circumstances, the reading of elaborate reports, however valuable or well written, would hardly be listened to with the attention necessary to their being appreciated.

In relation, also, to the publication of the awards of committees, it is proper to state that the papers through which they are given, are often so limited for room that they cannot give more than a summary of the premiums. This is the case in regard to the awards made at the shows of the New-York State Society. The list is a long one, even when it is abridged to the greatest practicable degree; and as there is always great anxiety to learn, at the earliest moment, how the premiums have been decided, it becomes almost necessary to publish the whole at one time. This of course precludes the possibility of giving the reports of committees in detail; but most societies publish their transactions in separate pamphlets or volumes, and these afford the appropriate mediums for giving to the public every thing connected with the societies, or having a bearing on subjects which come within the sphere of their operation.

FALSE THEORIES IN RELATION TO BEES.

A KNOWLEDGE of facts constitutes science. Correct observation alone, can lead to a knowledge of any science; from such knowledge only, will correct practice result.

The honey bee has been a prolific theme for guessing, among ancients as well as moderns. Numerous contradictory theories are advanced, extremely perplexing to the inexperienced apiarian, some of which must be refuted or reconciled by attentive observation, before uniform success can be expected. To refute some of these incorrect theories by a relation of facts, is the object of this communication.

That my observations may not appear too limited, I will say that I have had the care of bees for more than twenty years; and since 1840, of over one hundred hives. Some six or eight years since, I inquired through your paper, for the cause or remedy for young bees dying in the comb, which was replied to by several, assigning *cold* for the cause. I then gave some reasons for doubting that theory, which I think still hold good, and seem to be confirmed by further observation. But as that cause is still urged, I will state my objections.

Mr. Howard, in the January number gives his reasons very forcibly, that there is no disease in the young bees to prevent their hatching. In my experience, whenever I have discovered any dead larvæ, however few, they have never failed to increase and ruin the hive. When I first had diseased bees, I pruned out all the brood comb, leaving such only as contained honey. The bees made new and filled it with brood, which invariably became diseased. This suggested the idea of its being a contagious disease, and that the *honey* in such hive contained the poison. I have accordingly taken such honey and fed it to healthy young swarms, while raising young brood, as many as a dozen times, and never knew an instance where they escaped the contagion.

Mr. H. further says, that according to his observation, a *full colony* will secure themselves from cold, and of course, then, from the dead larvæ. Three years ago in March, I had a good swarm leave the hive and go in with another good one, and as there was a plenty of honey, I expected an early swarm, but got none at all. They gradually diminished till the last of June, when not more than half a swarm remained, and upon examination, I found the comb filled with larvæ, nine-tenths of which were dead. In 1840, I had two large swarms come out together, which were put into a barrel, and in the fall they were diseased. Several young swarms shared the same fate. The strongest are just as likely to become diseased, as the weakest colonies.

Mr. H. also says that the spring of '46 was the first in which his stock have suffered before swarming. I have not escaped a year in fifteen without having several, and last year no worse than others. When swarming time arrives, and I have any that have not increased as usual, on examination, I generally find diseased bees, and as my only remedy, drive them out, satisfied that they will grow worse after catching the distemper. So well assured am I of this fact, that I make two general examinations. About three weeks after the first swarm has left a hive, the young that are alive are generally hatched. If I find any of the breeding cells closed, (which is always the case with dead larvæ,) I open them with the point of a knife, and if dead give the bees a new habitation at once. Again, in the fall, every hive is looked to, and a half dozen diseased larvæ condemns it at once, for a stock hive. I will give any person twenty-five dollars who will give me an unfailing preventive or remedy for this disease; and I can well afford to do so, as I lose yearly by it twice that sum.

I have objections to some theories offered by Mr. Weeks, but before I state them, I must say that I am greatly indebted to him for information through the Cultivator, on the subject of bees. I would not exchange what I have learned for all the paper has ever cost me. But error, from any source, ought to be corrected. First, then, he says—"two causes, and two only can be assigned why bees ever swarm; the first, the crowded state of the hive; the second, to avoid the battle of the queens." I object to the first, because it is insufficient in all cases to make them swarm, and swarms do actually come out independent of either of these causes. I do not say bees being crowded will not sometimes bring out swarms, but some other cause must exist in such instances as the following. I have known all the bees to swarm from a hive, when a pint measure would contain the whole of them. Ten years ago, I had bees in a large box; before it was a quarter full, a regular swarm left. Last spring, to give the principle a fair test, I placed under five full hives of ordinary size, others of equal dimensions, without a top, so that the bees could continue their combs to the bottom if they choose, but not one has done so; each has swarmed without filling the lower hive an eighth part full. Want of room could not be the cause here, nor could they have swarmed to avoid the battle of the queens, for I have good reason to believe that the old queen led each swarm.

I have known bees so crowded that a great portion of them were obliged to remain out all summer, and yet they did not swarm at all. I have known swarms come out and return two or three times, and then continue in the old hive all summer, notwithstanding the young bees continued to hatch and increase the crowd in the hive. The fact is, no single theory will account for all swarms. I have noticed, however, that all regular swarms must be in a season when there is plenty of honey, and this is generally between the middle of May and the middle of July. We often have swarms in this section in August, between the 15th and twenty-fifth, when the bees are at work on buckwheat. At such times all good swarms will raise a brood of drones, whether the queen be young or old. Although this contradicts the theory that the queen must be at least eleven months old before they lay eggs for the drones, it is certain they will raise them at any time when they get plenty of honey, and as it gets scarce they will destroy them—consequently the last of July is a time of massacre. In the summer of '42, they killed them the fore part of June, and we got no swarms, but the hives were crowded with bees. I never had a swarm when they were destroying the drones.

Mr. Weeks says—"when the first swarm leaves the hive, no queen, in any stage of existence, is left." But I have examined hives the same day that the first swarms left, and found cells finished containing queens This has been the case in four hives out of five. I have driven out a swarm after several days of bad weather, and found queens' cells finished. Four hours of sunshine in the middle of the day, would probab have brought out the swarm. While examining a glass hive, during the past summer, I saw the bees constructing a royal cell. I watched it for more than a week. When finished I predicted a swarm, (although none were crowded outside for want of room.) The very day I expected them, they came out. In eleven days after, a second swarm came out. Previous to the last leaving, I had the satisfaction of seeing a young queen several times while making the piping noise, such as we can always hear just before the coming out of all swarms excepting the first of the season. She appeared very uneasy, running about in all directions, only stopping to vibrate her wings against her body, which was done simultaneously with the sound. This proves that queens sometimes make the noise when they are not in the cells. The other bees made no attack upon her, as some writers have stated they will do in such cases.

The supposition that all hives are left destitute of a queen when the first swarm leaves, has led to error in practice. Mr. Colton, of course, thinks, that young queens are unnecessary to produce swarms, as it is said his hive can be made to swarm within two days, at any time. Mr. Jones' dividing hive is on the same principle. I had supposed it was an established fact, that if a swarm was driven out with the old queen, leaving plenty of bees and young brood in the comb, queens might be raised as well as if they had swarmed, but I was mistaken. I tried three at first—not one swarmed. The only way in which I have ever succeeded in making them raise a queen from workers' eggs or larvæ, is to give them but a small piece, and then twelve days is as soon as they can perfect one. When I have occasion to take out a swarm and leave bees in the old hive, I find I must be very cautious, especially if it is not in swarming season. If I can see no preparation for a queen, I generally supply them with one in the cell. If any one doubts there being any young queens commenced, at the time the old one leaves, they can be satisfied that they are so, (at least sometimes,) by the following mode of examination. The evening after a swarm has left, or the next morning, blow some tobacco smoke into the hive to stupefy the bees; turn the hive bottom upwards, puff some smoke between the combs; the bees will retreat and give an opportunity to examine the combs; to the distance of six or eight inches into the hive. In many hives there will be some sheets of comb that do not extend across the whole way, making an edge somewhere near the middle. On this edge is generally placed the royal cells. Sometimes they are on the outside, next the hive, and often on the bottom. Look through the hive, giving the bees a puff of smoke occasionally, to keep them quiet. It is very seldom the queen cells are so near the top as not to be seen. I counted nine the past summer, in one hive, within two inches of the bottom. Some were sealed over, others not more than half done. This was the next morning after a swarm had left.

Another point in dispute, is whether the queen ever leaves the hive, excepting when leading a swarm. I have seen them do so often, in all instances between one and three o'clock, P. M., at which time more drones are out than at any other. She always came from a hive that a first swarm had left some fifteen or 20 days previous; consequently they were young queens.

Mrs. Griffith, of New-Jersey, I think, has watched for this, and felt confident that no such occurrence ever took place, and she has added as an objection, that as the prosperity of the hive depended on one bee, and that one should leave for an excursion in the air, it would be liable to be devoured by birds, driven off by winds, or destroyed by other casualties, by which the hive would be lost. Now, just such cases do actually occur. The queen at this period, from some cause, is occasionally lost—one in twenty on an average, and with me this year, one in ten. The apiarian who cannot ascertain this loss, does not understand his whole business, and as there are many who do not, I will say that if they would take the trouble to look at their hives for a minute in the morning, before the bees commence work, about fifteen or twenty days after swarming, they could, by the commotion of the bees, ascertain the loss of the queen. They will see the bees running about in all directions, while in other hives they are quiet. In the middle of the day it is not so easily perceived. After two or three mornings they seem to become reconciled to their fate, and continue their labors as others do. I noticed this in one of my hives before I had half a dozen, and occasionally ever since. The result generally has been, that before cold weather, or very soon after, the bees would all be gone, and yet the hives nearly as heavy as others.

Now, when I have a case of this kind, and I have had a swarm within a week, I proceed to look for queen's cells, and with a broad knife I cut out one or more, (as they generally have several I have no fears of leaving them destitute,) and introduce it in a vertical position into the hive that has sustained the loss. In a short time all will be quiet. I have often put it in through a hole in the top of the hive, taking care that the lower end shall touch nothing. If more than a week has passed after a swarm has left a hive, it is unnecessary to look in that for a spare queen, for they are generally all destroyed by that time, unless they intend to swarm again, which can be ascertained about the 8th day, by listening close to the hive for the piping noise.

Second and third swarms often have several queens —I once had six in one swarm. When necessary, I take one of these and put it in the hive—even if there is but one, I take it and let the swarm go back; which is often an advantage, besides giving the old hives a queen. But if no queen can be had in any way, a piece of brood comb containing eggs or larvæ of workers must be introduced, but this is more uncertain to produce a queen. If all these circumstances were duly attended to, we should have less complaint of hives being found destitute of bees and full of honey—or as is often the case, full of worms. Such instances often occur with negligent bee-keepers, when they supposed the bees were doing well.

One of your correspondents supposes that bee-bread is changed to honey. I wish he had stated the time necessary to effect the change. I have had it two years old, or more, and it was still bee-bread. I have "lots" of it every year when I am making wax. I have put it on my garden, but can see no great effect from it as manure, and should like to turn it to some better account. There is no doubt that the bees collect the pollen or bread for food for their young. One circumstance in particular confirms me in this belief. When a hive loses its queen, and is not supplied with one, there is of course no brood, but if there is plenty of bees, nearly every cell will be two-thirds full of bread, and finished out with honey and sealed over. The comb looks very well outside, but it is disagreeable to eat in this condition, and it is impossible to separate all the honey from it, and I have never been able to get out all the wax.

I have had two or three young swarms lose their queen a few days after being hived, and they filled the hive nearly full of what appeared to be very nice honey; but a person taking it for such would be greatly mistaken—it is as much bitter as sweet.

Other theories have been advanced which are contrary to my experience, but the objections would lead to little practical utility, and I shall say nothing of them here. I did intend to have said something on economy in the construction of bee-hives, but have not room. *Coxsackie, N. Y.*, 1847. M. Quinby.

RUNNING OUT OF VARIETIES—CHANGE OF SEED.

We have often spoken in reference to this subject. Still there is no doubt many entertain the idea that varieties of grain, vegetables, and fruits, have their periods of existence. Another idea, akin to this is, that it is necessary to "change seed"—that a kind of corn, potatoes, or other vegetables, naturally tends to degenerate, when its cultivation is continued on the same farm; and that to insure the best crops, seed must occasionally be procured from a distance. We believe that the reverse of this is true—that the tendency is to naturalize on every spot of earth those species and varieties best adapted to the situation and circumstances. Man, it is true, may counteract this effort of nature by modes of propagation adverse to the principle. The natural course would be to encourage and continue those plants which had best adapted themselves to the location, and which would from generation to generation produce the most perfect seed and the most vigorous stock. Man, instead of this, sows the seed perhaps, of those plants which are least perfect, and which, in consequence, produce a degenerate stock, declining still more with each generation.

It should be the aim of every farmer to procure in the first instance, those kinds of grain or vegetables, which, from their known character, would be most likely to succeed on his land; and then to select seed from those particular plants or stocks which are found in the greatest perfection. Let this course be strictly and constantly followed, and no change made, (unless as a mere experiment on a small scale,) till it is *certain* that a *better* kind can be substituted.

We lately met with some striking facts in reference to this subject, in an article written by Joseph Cooper, of Cooper's Point, New Jersey, and published in the *Memoirs of the Pennsylvania Agricultural Society*. The article was written in 1799, and shortly after its appearance in this country, it was re-published in Europe, where it received much attention. Mr. Cooper was led by his own experience and observation, continued through more than forty years, to repudiate the idea—"that changing seeds, roots, and plants, to distant places, or different soils or climates, is beneficial to agriculture." He says—

"In or about the year 1746, my father procured the seeds of the long early squash, which have been kept on the farm ever since without changing, and are now *far preferable* to what they were at first. Our early peas were procured from London the spring before Braddock's defeat, (1756,) and have been planted successively every season since, on the same place. They have not been changed, and are now preferable to what they were when first obtained. The seed of our asparagus was procured from New-York in 1752, and since that time I have not planted a seed except what grew on my beds; and by selecting the seed from the largest stalks, I have improved it greatly. A complaint is very general that potatoes of every kind degenerate, at which I am not surprised, when the most proper means to produce that effect are constantly practiced, to wit: using or selling the best, and planting the refuse; by which means almost the whole of those planted are most degenerated. This consideration induced me to try an opposite method. Having often observed that some plants or vines produced potatoes larger, better shaped, and in greater abundance than others, without any apparent reason except the operation of nature, it induced me to save a quantity from such only for planting the ensuing season; and I was highly gratified in finding their production exceed that of others of the same kind planted at the same time, and with every equal advantage. By continuing the practice, I am satisfied I have been fully compensated for all the additional trouble."

Mr. Cooper also states that about the year 1772, he received a few grains of a small kind of Indian corn, said to have come originally from Guinea, and to have the habit of bearing eight to ten ears on a stalk. The corn was planted, and the ears were of a very small size, small kernel, and but little ripened before frost. He saved some of the largest and earliest, and the next season planted them between rows of a larger and earlier kind. He saved seeds from stalks that produced the greatest number of the largest ears, and were the *first to ripen*, which he planted the ensuing season, and he found the product superior in quantity and quality to any he had ever before raised. He continued to plant that kind of corn, always being careful to select the seed, and it proved so valuable that he never changed it. He gathered the seed in the field, selecting the earliest and best ears—or rather, selecting from stalks containing the greatest number of good ears.

He mentions also a striking example in regard to melons. He received from Georgia some seeds of a kind of water-melon represented to be of superior quality. He says—"knowing that seed from vegetables which had grown in more southern climates required a longer summer than that produced here, I gave them the most favorable situation, and used glasses to bring them forward, yet very few ripened to perfection; but finding them to be as excellent in quality as described, I saved seed from those first ripe, and by continuing that practice four or five years, they became as early melons as I ever had."

A similar instance in regard to the naturalization of melons came within the knowledge of the writer. Several years since, a gentleman near Zanesville, Ohio, brought from the southern part of Virginia some seeds of a choice variety of water-melon. The kind had been cultivated in the neighborhood from which the seeds were taken with great care, and kept entirely free from any intermixture for fifty years. The new location afforded a season hardly long enough for their full maturity, but by taking care to select the earliest, the variety became in a few years adapted to the climate, and our friend became noted for the finest water-melons ever known in the region.

Bite of a Mad-Dog.—To prevent all danger of this terrible disease, cauterize the wound thoroughly with lunar caustic, introducing it most effectually to every part of the wound, and enlarging the wound if necessary. An eschar is soon formed, which sloughs away, carrying off the poison, which never immediately penetrates the system. A second application ensures more complete safety. The celebrated author of Youatt on the Dog, was many times bitten in his life, but always cured himself in this way.

Good Black Ink.—¼ lb. of nut-galls; 3 oz. of gum arabic; 3 oz. of copperas. Soak the nut-galls in 3 pints of rain-water; the gum arabic in half a pint of warm rain-water; the copperas in another half pint; let them stand separately 48 hours, and then mix them, and the ink is made. This is the recipe of Prof. Webster, of Harvard University.

AGRICULTURE AND RURAL ECONOMY OF EUROPE.

NOTES OF A TRAVELLER IN ENGLAND AND WALES.

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WALES.—The appearance of Wales is far different from that of England. On approaching it from sea, its lofty mountains, Snowden and Penmaen-Maur, and other bold cliffs, are very picturesque, but give little indication of the delightful associations which the traveller witnesses in passing through the country. The mountains, half clad in rolling vapors, assume a picturesque grandeur, and few countries can produce more glorious mountain scenery than is exhibited in Wales. The mountains are generally half concealed in mists, upon which, as the sunbeams fall, they assume hues of the most brilliant nature, which contrast finely with the lofty mountains, round which they play in never ending variety.

The most convenient access to North Wales, is from Liverpool, by steam-packets, which ply daily, to Menai Bridge. The passage down the river Mersey, gives a fine view of the spacious docks, and extensive piers and quays of Liverpool, covered with the multitude of people from every clime. On the opposite side of the river is the new and flourishing town of Birkenhead, with its newly erected spacious docks, which are destined to become formidable rivals to Liverpool. The scenery here is very fine, and the appearance of this newly erected and flourishing town is much more like our American towns than most of those we saw in England. As the steamer glides past the Cheshire coast, you pass Rockfort, which commands the entrance into Liverpool. This is a very finely constructed circular fort, mounting about 25 pieces of cannon, all mounted so as to be used with great effect upon vessels approaching the mouth of the river. Near the fort is a light-house called the Rock-light, which has a revolving light, with 3 different lights—deep red, bright red, and white, exhibited in about 2¼ minutes. The Cheshire and Welsh coast, along which the steamer proceeds, is studded with villages and signal stations, and on the highest elevations are discovered the telegraphic stations from Liverpool to Holyhead, about 80 miles—stations 8 to 10 miles distant—worked by arms—and intelligence communicated in about 10 minutes. Intelligence of vessels arriving—state of the weather, &c. Steam tugs are sent down from Liverpool to bring up the packets as they are telegraphed.

The floating light, which is a vessel firmly moored in the channel, contains a beacon light, hoisted at its mast head at night, to guide vessels from the shoals, with which the mouth of the Mersey abounds, is in sight. We pass the great Ouns Head, which is the most striking object; it juts out from the main land, and looks like a large mountain in the sea. It is connected, however, with the main land by a low valley. The head can be seen a distance of 30 miles, and as you approach it, it becomes terrific—and especially to the mariner in a storm from the northwest—and many a brave and hardy crew have found their graves at its base. Near the top of Ouns Head, and in the midst of a pasture where the small Welsh sheep, so famous for their superior mutton, are observed, (not larger to appearance from the steamer, than small lambs,) is discovered a church, surrounded with a small enclosure. No habitation is perceptible in its vicinity; yet I was told there were hundreds of people from the opposite side of the head attended worship here on the sabbath. Here is one of the finest prospects that can be imagined.

The river and valley of Conway is next seen. Conway is a perfect walled town, though very small. Its situation, on the rising ground from the river, is very fine; though after passing the walls into the town its beauty vanishes, as it is very inferior. It has one of the most magnificent ruinated castles in the kingdom. It was erected by King Edward the 1st, in 1284—was calculated to hold 2000 men—and is now a most attractive ruin,—still in considerable preservation. The court-yard, and most of the rooms are entire; a portion only of one side of the wall being gone. The appearance of the castle from a distance is very fine. There is a suspension bridge here, built about 20 years ago, and the new railroad from Chester to Holyhead, passes by the tower, under the walls of the town. Soon after passing the mouth of the Conway, the steamer brings you alongside Penmæn-Maur, the termination of the Carnarvonshire mountains, 1550 feet above the level of the sea, and on its side is seen the great mail road between Conway and Bangor. Soon after passing through Beaumaris Bay, the town of Beaumaris, the county town of Anglesea, with its fine castle, appears, with Bangor on the opposite side of the bay; and here is first seen the Grand Menai suspension bridge, which is the admiration and wonder of the thousands who have viewed it. The plan of the present bridge, on the suspension principle, was adopted in 1818. It consists of an opening of 500 feet between the points of suspension, and there are in addition 7 arches—four on the Anglesea coast, and three on the other of sixty feet span each; making the whole bridge 910 feet long. There are two road ways, with a foot path in the centre. It was commenced in 1820, and completed in 1826. The suspension chains consist of four strong iron cables—perpendicular iron rods, five feet apart, supporters of the road-way. The largest vessels pass under the bridge without difficulty. The fastenings of these ponderous chains in the rocks are shown, and are worth examination. The bridge is so firm that carriages pass over it at full speed, without any perceptible effect.

The expense of this bridge was not far from 60,000 pounds sterling. It is a most splendid structure, evincing the triumph of the mechanic arts. Previous to its erection, the intercourse between Anglesea and Carnarvonshire was by boats, and the cattle from Anglesea passed over by swimming across the strait. Frequently they were carried far down into the bay, but few if any were lost.

From the bridge you view a fine monument erected to the Marquis of Anglesea on his estate, to commemorate his services at the battle of Waterloo, where he lost a leg. He still lives, and is extremely popular with his Welsh connection, though I believe he cannot speak a word of the language. His country residence here, and his estate, give evidence of his care and attention to its proper management, both for the benefit of himself and his tenants. He is everywhere spoken of in terms of the highest respect and enthusiasm. I have no doubt from what I heard of him, both in Wales and in London, that he is justly entitled to the good opinion expressed of him, and that if his example was more frequently followed, much of the misery which prevails among the farming population would be avoided.

The appearance of Anglesea, as well as Carnarvonshire, is very different from England. The numerous mountains and lesser elevations afford far less tillable land than is to be found in most parts of England. In many parts there is a want of that neatness and care which so generally prevails in England. Still most of the land is under a very fair state of cultivation, and many of the tenant farmers are wealthy, and have as many comforts and conveniences as can be found in any part of the kingdom. H.

RURAL NOTICES ABROAD—By Ik. Marvel.

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Wines of France, (Continued.)—*Champagne.*—The town of Epernay is near the centre of that district which furnishes the Champagne wines. The soil rests generally upon lime stone, and is in many parts but a loose marl.

The high road from Paris to Metz, (east by north from the capital,) passes through many of the esteemed vineyards. Toward Rheims, is the high country where is made most of the red wine, (vins de la montagne.)

The system of cultivation is the same that obtains in other vineyards. The grape from which is made the best known sorts, along the Marne, is small and exceedingly sweet, and very much affected in product by the season. The vintage is later by a fortnight or more than in other vineyards. The bottling takes place in the spring following the vintage; and the sweet taste possessed by most champagnes is given by the addition of sugar dissolved in wine. If this *liqueur* or syrup be formed of red wine, it gives the pink tinge belonging to so called pink champagne. The taste of the wines is very much altered, and not unfrequently much improved, by judicious mixtures. More or less of *liqueur* is added, as the vintage may be intended for home or foreign consumption—for the Russian or English market.

Every season has its own reputation as producer of good or bad wine. Hence the favorite date of 1842, known over Europe as a superior year. And it is probable that the wine of 1842 will last for a century to come. Nor is there a system of counterfeiting in date only, but also in name. A tenth part of all the champagne made is lost annually by breakage. It is needless to say that the loss is more than made up by sweetening and carbonating the cheaper white wines of France, and the stocks of the Rhine.

A company of large capital exists in Paris for making Champagne from the poorest Chablis. It is sweetened, charged with gas, bottled, labelled, and ready for market in an hour after leaving its quiescent state of *vin ordinaire*. The drink, however, is palatable—vinous—effervescing—bears a good price—is slightly intoxicating—does not cloy the appetite, and so answers all the ends of all those tavern keepers and tavern loungers who are both honest and ignorant.

Nor is this all of counterfeiting. Champagne, or what passes for Champagne, is also made from apples, and gooseberries, and beets, and I know not what beside; so that the chances of procuring in one of our western inns, a bottle which has actually lain in the chalk cellars of Epernay, and been tilted day after day by the wine watchers of Madame Cliquet, and disgorged of sediment, and refilled, and flavored, and new corked, and escaped the season of bursting, and the English merchant, and the French trader, and the Russian prince, and the German landlord—are almost infinitesimal.

Some idea may be formed of the extent of the vineyards, from the fact that a single proprietor expends $25,000 a year for corks alone. The annual average product of all the vineyards in the Champagne district, is fifty millions of bottles. Of this number, nearly half goes every year to Russia; England has of course a lion's share; Germany boasts of nearly as much; there is plenty to be found in Italy—as much more at Madrid; the French drink of course occasionally, and America and the Indies are noway behind the others in claim.

Vineyards of the Rhine.—There are very pretty stories told by many of the tourists, of the vineyards along the Rhine;—of baskets filled with earth, lodged in crevices of the rocky banks—which baskets of earth nourish vines that trail their purple clusters all down the cliffs. Such stories are to be taken with some exceptions. There are, indeed, here and there upon the west bank, little shelves of rock, where earth is scanty, and where more has been deposited, and retained in its place by pikes of wood, interlaced sometimes with osier, and there grows on them a short stumpy vine, close trimmed, and bearing not many clusters, or large, but fruit yielding superior wine. Nor is it because the banks of the Rhine are so valuable agriculturally, that this care is taken of a little soil. I had expected, indeed, from the stories I had heard, to see every foot garnished with well repaying toil; but instead, were acres and acres almost waste, or fed upon by scraggy-limbed cows, or goats, and half covered with brush. These banks too sloped to the water, but unfortunately did not possess that particular exposure, or quality of soil, requisite to make the wine; and a single foot of that so cautiously cherished under one cliff, might be worth an acre on the opposite bank.

I do not object to the basket stories that they lack interest, or, indeed, have not enough of plausibility—but that they give an incorrect *agricultural* idea of the country.

The vine culture is much the same in Germany as in France. Particular localities furnish a choice vintage, and an adjoining field furnishes a worthless crop. The best wines are grown upon the immediate banks of the river;—the most noticeable vineyards are perhaps those upon the rocks opposite Remagen, and at Assmanshanson. They are found upon ledges, of but a few feet in width, and on the precipices opposite Remagen are in fact sustained in their crevices by osier work alone.

The vintage is later than in France, frequently so late as in November. The famous vineyard of Johannisberg is in full view of the river—a slaty yellowish soil, with vines of yellow sickly color. Its extent is only 62 acres, and it is attended with the utmost care. Its product, in good years, is 50,000 bottles—valued at nearly as many dollars! I need hardly say that it is the wine of princes and noble families;—that even the smallest quantity of the most indifferent vintage rarely finds its way into the market. The absurdity, therefore, of those small tavern keepers who put Joannisberg on their wine bills is only less pitiable than the ignorance of those who order it.

Rust in Wheat.—The Maine Farmer doubts that fungi are the cause of rust in wheat. He thinks the epidermis bursts, the sap runs out, and the seeds of the fungi then lodge in it and grow. The use of a powerful achromatic microscope would convince him that this opinion is error; for by it the clear, distinct, and regularly formed fungus plants are not only seen, but their thickly crowded, rounded heads are most clearly discovered through the transparent coat, while it is swelling upward from the pressure of their growth, and before it has burst open.

Preparing for Wheat.—Recent experiments indicate, that instead of plowing three times for wheat, as is usual with summer fallows, it is much better to plow but once; provided the work is done in the best manner, that is, very deep, and with very narrow slices. The time when this work is done is not essential—the cultivator is used solely for clearing the weeds and covering the seed. The success has been complete—but it may not be so well adapted to clays.

CHARACTERISTICS OF THE SEASON 1847.

The spring opened late—the weather continuing so cold till May that vegetation made little or no progress. In fact, it was not till the 20th of June that Indian corn and other plants requiring a high degree of heat began to grow vigorously, in this latitude. But the lateness of the season was in one respect favorable—it retarded the foliage of trees till so late a period that there was no frost after the blossoms appeared. In consequence of this, the tender fruits—peaches, for instance—were more abundant in the northern part of the country than they had been for many years. For four or five weeks from the 20th of June, the temperature was steadily warm, and during this time so rapid an advance was made by crops in general, that they experienced no material check from several days of unseasonably cool weather, which occurred towards the latter part of July. August was for the most part only moderately warm. The fore part of September was favorable—there being no frost to affect vegetation till the 15th, by which time crops were generally so far matured as to suffer no injury.

As to moisture, different sections have been very differently affected; the clouds have been exceedingly capricious; for while the greater portion of the country has been rather unusually favored with seasonable rains, certain neighborhoods have been visited with very severe drouth. The variation has sometimes taken place in a striking manner. In some cases the districts that have suffered from drouth were quite limited in extent and surrounded by others which have had plenty of rain. In general, however, the drouth has occurred in narrow tracts extending nearly southwest and north-east. In this vicinity, there was sufficient rain through most of the season, and we believe the same remark may be made in regard to the vicinity of New-York, and the most southern part of the state generally; but between the two points named, viz., at Newburgh, and to the southwest of that place, a deficiency of moisture lessened the yield of most crops to a serious degree.

The *grass* or *hay* crop, taking the country together, was probably a full average one. There were deficiencies in some sections from the grass having been winter-killed, and in others from drouth.

Wheat, notwithstanding its unfavorable appearance in the early part of the season, gave, with few exceptions, about a middling yield; and from the large extent of ground occupied by the crop, the aggregate amount of this grain produced in the country, is probably not less than in any former year. In some sections the crop was considerably winter-killed, and it suffered in the west by the fly. Spring wheat, which was sown to some extent where the winter variety failed, and which is considerably cultivated in the northern section of this country and in the Canadas, generally yielded well.

Rye, *barley*, *oats*, and *buckwheat*, gave their usual returns. The latter crop is spoken of as particularly good in quantity and quality. All the small grains were generally secured in good order.

Indian corn—which it has been said, "forms the *back bone* of our husbandry," and it might have been added, of the people, too, in a great degree—has given a full crop. It will be remembered that this grain was, the last winter and spring, in great demand, and brought high prices for exportation to the British islands. This circumstance induced farmers in the eastern part of the country to plant very largely of this crop the present year. The product has been satisfactory, and we trust there will be no cause of complaint on the score of profits; but it should not be forgotten that the high prices of last year were occasioned by an almost unprecedented scarcity of breadstuffs in England, Scotland, and Ireland, and with the good crops which have there, as well as on the continent of Europe been obtained the present year, no such extraordinary demand can be expected to arise. Still the article has now been fairly brought into use in the countries mentioned; and from our improved modes of preparing the grain by kiln-drying, and the nice manner which is adopted of putting up the meal, it may be confidently expected that its consumption will continue, and that it will after a while be generally esteemed. In every view of the case we think there is a better prospect of opening a permanent and profitable trade with England in Indian corn, than with any other article of breadstuffs; because it cannot be successfully produced there, and is not much cultivated in any of the European countries, though wheat is grown largely by all those countries, and many of them have usually a large surplus for exportation.

Of the *potato* crop we hardly know what to say. It was planted to a great extent in all sections accessible to the large eastern markets. The tubers vegetated well, the vines grew vigorously and appeared perfectly healthy in this vicinity till the latter part of August. At that time the blight made its appearance, killing the tops and turning them black in the space of a few days, and shortly after the tubers began to rot. We are unable to state the extent of the disease as compared with former years. From what we have heard, it appears to have occasioned more damage in the eastern part of the country and in this state than heretofore.

In regard to the cause, prevention, or cure of the disease, we are not aware that any new light has been obtained the present season. If anything has been added to the general stock of knowledge by another year's experience, it is that all the nostrum and quack remedies which have been put forth in regard to the subject are worthless.

It will be noticed that the blight which precedes the rot, came on about a month later the present season than in 1846. From this circumstance, and the healthy appearance, up to a late period, of the crop of the present year, great hopes were entertained of its exemption from attack.

In regard to the greater liability of some kinds to rot, the same evidences have appeared this season as formerly. From the accounts we receive, the Mercers, ("Neshannocks" or "Chenangoes,") suffer most, and next to this variety the Carters.

We have heard of several instances where early kinds planted on favorable soil, early in the season, got fully matured, so that the vines had died naturally, at the time the blight occurred. In such instances we believe the crop has remained sound; though on the same farms, the same kinds that were planted so late that the vines were killed by the blight, have rotted to a great extent.

Wool Manufacture.—The Middlesex company at Lowell, daily consume about *six thousand* pounds of wool. The company has already purchased of the present year's clip, nearly *two million* pounds.

The Potato Rot is making fearful ravages in several parts of Ohio—from three-fourths to nine-tenths being already destroyed in some neighborhoods.

NOTICES OF NEW PUBLICATIONS.

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Transactions of the Massachusetts Horticultural Society, for the years 1843, 4, 5, 6; to which is added the Address delivered before the Society on the 15th of May, 1845, at the dedication of their hall.

This wealthy, influential, and useful Society was incorporated in 1829. It has been the instrument of awakening a great interest in the culture of fruits, and has been the cause of important improvement, not only in horticulture, but in the general embellishment of the country and country residences. Besides the good it has accomplished in the pursuit of its legitimate objects, the public is indebted to this society for the foundation and improvement of the Mount Auburn Cemetery, an object of cherished interest to the people of Boston and vicinity. The "Transactions" contain the principal doings of the Society since its organization. The mechanical execution of the work is highly creditable to the publishers, Messrs. **Dutton & Wentworth**, Boston.

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Ewbank's Hydraulics and Mechanics; a descriptive account of Hydraulic and other Machines for Raising Water, ancient and modern, with observations on various subjects connected with the Mechanic Arts; including the progressive development of the Steam Engine: in Five Books, illustrated by nearly three hundred engravings: By **Thomas Ewbank**.

Messrs. **Greeley & McElrath**, of New-York, have commenced the republication of this work, which they propose to complete in eight numbers, at twenty-five cents each. We have received the first number, which is got up in excellent style. The engravings are very neat, and convey correct ideas of the objects they are intended to represent. The work has the reputation of being the best extant, which treats of hydraulics and mechanics.

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The Commerce and Navigation of the Valley of the Mississippi; and also that appertaining to the City of St. Louis: considered with reference to the improvement by the General Government, of the Mississippi river and its tributaries; being a Report prepared by authority of the Delegates from the city of St. Louis for the use of the Chicago Convention of July 5, 1847.

This pamphlet of thirty-two pages, embraces a striking exposition of the immense natural resources, present business, and important future prospects of the Great Valley of the West. We have seldom seen so many valuable statistical facts compiled in so small a space.

In the increase of population, business, and wealth, the world probably affords no parallel to the Mississippi valley. We are informed that at the first census, in 1790, the population of this valley "did not exceed 200,000. In 1800, it had increased to about 560,000; in 1810, to 1,370,000; in 1820, to 2,580,000; in 1830, to 4,190,000; in 1840, to 6,370; and in 1847, according to the preceding average ratio of increase, it exceeds 10,520,000. In the year 1850, according to such ratio, it will exceed twelve millions, and be about equal to the population of all the Atlantic States."

In regard to the early navigation of the Mississippi, we are told that the first appearance of a keel boat on this stream, above the mouth of the Ohio. was in 1751, "when a fleet of boats commanded by Bossu, a captain of French Marines, ascended as far as Fort Chartres." One of these boats is said to have "run against a tree," which burst the boat and let in such a quantity of water that it sunk in an hour's time." This is supposed to have been the first boat snagged on the Mississippi. "From three to four months was the time consumed at this period, and for many years afterward, in a voyage from New Oleans to the settlement in the vicinity of St. Louis; a voyage occupying a steamboat in 1819 twenty-seven days, but which of late has been accomplished in less than four days!" Steam navigation on the Mississippi was commenced in 1817. "In 1834, the number of steamboats on the Mississippi and its tributaries, was 230, and their tonnage equal to about 39,000. In 1840, the number was 285, with a tonnage of 49,800. In 1842, the number was 450, and estimating their burthen at an average of 200 tons each, their tonnage was 90,000. In 1843, the number was estimated at 572; tonnage 134,400. In addition to the steamboats, there are estimated to be employed on the same rivers, about 4,000 keel and flat-boats."

The receipts at New Orleans from the upper country, for the year 1846, are put down at $77,193,464.

The following table shows the length of steamboat navigation on the principal rivers of the west:

Mississippi, from the Gulf to St. Anthony's Falls,.	2,200	miles.
Missouri, from its mouth to the foot of the Rapids,.	2,000	"
Red River, to head of Navigation,................	1,100	"
Ohio, to Pittsburgh, ...	1,000	"
Arkansas, to mouths of the Neosho and Verdigris,.	630	"
Tennessee, to Chattanooga,.......................	485	"
Wabash, to Lafayette,............................	300	"
Illinois, to Ottawa, ...	250	"
Cumberland, to Nashville,........................	200	"
Osage,...	200	"

"A steamboat leaving Pittsburgh, and going to New Orleans and being there chartered to go up the Mississippi as high as the Rapids, and thence returning to Pittsburgh, will perform a regular voyage of about 8.450 miles, a distance nearly equal to crossing the Atlantic three times."

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The Physiology of Digestion, with Experiments on the Gastric Juice: by **William Beaumont**, M. D., Surgeon in the U. S. Army. Second Edition; published by **Chauncey Goodrich**, Burlington, Vt.

This work comprises an account of some of the most curious and instructive experiments which have ever been made on the physiology of Digestion. These experiments were made *in the stomach of a living and healthy man*, who, by the accidental discharge of a musket, received a wound which opened the stomach, and which never entirely closed. Through this aperture, the process of digestion could be observed and actually *seen*. Different substances were at various times introduced into the stomach through the opening, and having remained there for different lengths of time, were withdrawn, and the change which they had undergone carefully noted. The *gastric juice* was in several instances taken from the stomach, and many interesting experiments made with it in regard to its effect on articles of food. These experiments extended through a period of several years, and were made under the observation of many distinguished physicians and men of science. The book concludes with a summary of inferences deduced from the experiments and observations. Some of the most important of these inferences are as follows:

That *animal* and *farinaceous* aliments are more easy of digestion than *vegetable*.

That the susceptibility of digestion does not, however, depend altogether upon *natural* or *chemical* distinctions.

That digestion is facilitated by *minuteness* of *division* and *tenderness* of *fibre*, and retarded by opposite qualities.

That the *ultimate principles* of aliment are always the same, from whatever food they may be obtained.

That the *quantity* of food generally taken, is more than the wants of the system require; and that such excess, if persevered in, generally produces, not only functional aberration, but disease of the coats of the stomach.

That *bulk*, as well as *nutriment*, is necessary to the articles of diet.

That *oily* food is difficult of digestion, though it contains a large proportion of the nutrient principle.

That the *time* required for the digestion of food is various, depending upon the quantity and quality of the food, state of the stomach, &c.; but that the time ordinarily required for the disposal of a moderate meal of the fibrous parts of meat, with bread, &c., is from three to three and a half hours.

That stimulating condiments are injurious to the healthy stomach.

That the use of ardent spirits *always* produces disease of the stomach, if persevered in.

That the natural temperature of the stomach is 100 deg. Fahrenheit.

That exercise *elevates* the temperature; and that *sleep* or *rest* in a recumbent position, *depresses* it.

That the *agent* of chymification is the *gastric juice*.

That it acts as a solvent of food, and alters its properties.

That it contains free *muriatic acid* and some other active chemical principles.

That *gentle exercise* facilitates the digestion of food.

That the motions of the stomach produce a constant *churning* of its contents, and admixture of food and gastric juice.

That these motions are in two directions, transversely and longitudinally.

That *no other* fluid produces the same effect on food that gastric juice does; and that it is the only solvent of aliment.

This book may not be entirely new to all our readers, as it is several years since the first edition was published; but we recommend it as an interesting and instructive work to such as are not already familiar with the subject on which it treats. A few copies for sale at this office.

AGE OF CATTLE AND SHEEP.

It is generally supposed that the age of cattle and sheep can be accurately determined by the teeth, till after they are five years old. These animals, as nearly every farmer knows, have at their birth, or shortly afterwards, eight incisor or front teeth in the lower jaw, called *milk teeth*, which at various periods fall out and are replaced by others called *permanent* teeth. The common theory in relation to this change is, that the two centre teeth are dropped soon after the animal is a year old, and are followed by two permanent teeth which reach their full size about the time the animal is two years old; that two other milk teeth, (one on each side of the two permanent teeth which first appear,) are dropped each succeeding year. and are followed by permanent ones, till all the milk teeth are gone, and the animal becomes "full mouthed," as it is called, at five years old.

Observation long since convinced us that this rule does not afford a sure criterion of the age of these animals. We have known several instances where cattle and sheep were, from their teeth, supposed to be from one to two years older than they really were. The circumstance has frequently led to difficulty, especially in awarding premiums, the idea being entertained that there was some mistake or intended deception in regard to the age.

A few years ago, an individual in the state of Ohio, purchased of a highly respectable breeder in New-York, a fine three-year-old Durham bull. On his arrival in Ohio, he was exhibited at a cattle-show, where he was examined by many persons, several of whom, on looking at his teeth, declared him to be five years old. It was in vain that a certificate, in the handwriting of the breeder was shown, stating him to be but three years old—it would not satisfy the critics, who insisted that there had either been collusion in regard to the bull's age, or else the purchaser had "*got Yankeed*." Yet the testimony of the breeder, we presume, would have been regarded as sufficient in a court of law, to establish the fact of the animal being but three years old; and there was nothing, except the appearance of the teeth, to indicate that he was older.

Cases of the same kind might be cited in regard to sheep; and several farmers and breeders have assured us that good or bad feeding will frequently cause a variation of a year in the appearance of their teeth.

A French veterinary journal has lately brought out some valuable facts in relation to this subject. It appears that on the 15th of April, 1846, an agent of the government purchased a two-year-old Durham bull, at the dairy of the Royal Stud, at Pin. Shortly after the purchase, the bull was exhibited for a premium, but the judges refused to award him the prize, it having been specified that the animal should be but two years old, and they, believing this one to be four years old and upwards, as he had all his permanent teeth. The decision, as may well be supposed, created some stir, and to settle the point in dispute, letters were addressed respectively, to the Directors of the Royal Dairy at Pin and Poussery, containing the following questions:

"1. Are there in the dairy over which you preside, cows or bulls which have cut the whole of their permanent teeth prior to their fifth year, and how many?

2. Are there any which have cut all prior to their fourth year?

3. Are there any which have cut their teeth earlier?

4. At what medium age, according to your personal observation, do Durham oxen, bulls especially, shed the whole of their milk teeth?"

The answers to these questions by each of the Directors, showed that in each of the Royal Dairies there were ten animals, viz., at Pin, one bull and nine cows, and at Poussery, two bulls and eight cows,—which had cut the whole of their permanent teeth prior to their fifth year; that in the latter case all the animals had their permanent teeth prior to their *fourth* year, and that in the dairy at Pin, there were seven animals —one bull and six cows—in the same case; that at Pin there were four cows, and at Poussery one bull, which had cut all their permanent teeth before they were three years old. A case of a cow at Poussery is mentioned, which at two years and seven months old, had six permanent teeth, and two months after, that is, at two years and nine months, had put out her corner teeth, making the full number of permanent ones. The date of the birth of most of these animals is given, copied from the registers kept at the establishments, so that there is hardly a possibility that there could be any mistake. The Directors further state that the cattle of the Durham breed, kept at the dairies under their charge, usually shed the whole of their milk teeth between their third and fourth years.

The variation in the time at which cattle and sheep shed their first teeth, is attributable to two causes— the natural constitution of the animal, and the manner in which it has been fed and reared. Some animals, from these causes, reach maturity much sooner than others, and their dental organs, sharing equally in the precocity of the system, exhibit the condition which belongs to those of older animals, which are longer in arriving at their full growth.

We respectfully commend the above remarks to the attention of breeders of animals, confident that observation will fully confirm the correctness of the conclusions put forth.

Provide good shelter and proper food for all animals.

THE CHERRY PLUM.

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The above is a cut of the Cherry plum, sometimes called the Early Scarlet, and known in Europe as the Myrobolan. Mr. **Downing** describes this fruit in the *Horticulturist* as follows:

"The Cherry Plum is not a high-flavored fruit; it is only what may be called one of pleasant flavor. But it is, we believe, the earliest of plums; it ripens at a season when fruit of every kind is exceedingly scarce; and it is quite an ornamental as well as acceptable addition to the desert in the month of July."

It is considered a poor bearer; but Mr. D. states that Mr. **Samuel Reeve**, of Salem, N. J., has adopted a method by which the variety is made productive, and he finds its culture as a market fruit very profitable. He supposes its usual non-productiveness is owing to too great a production of leaves and wood. "He therefore," it is said, "*transplants* his bearing trees every five or six years. In this way, the over-luxuriance is checked, and an abundant crop of fruit sets and ripens every year." It is stated that Mr. R. sends this kind of plum to the Philadelphia market early in July, when it brings from five to eight dollars per bushel. Mr. **Downing** suggests that *root-pruning*, performed every two or three years, would answer the same purpose as transplanting.

Application of Salt to Plum Trees.—On page 255 of the present volume of the Cultivator, it is stated that Judge Cheever had lost three plum trees from putting salt round them. Last winter I had occasion to empty some fish barrels, and I directed the man to put the contents round some plum trees that had not grown much the previous season. He put four pailsful (the common painted pail,) round four trees. The brine and salt together came in immediate contact with the body of each tree. I shortly after saw the communication of Mr. Shurtleff in the Horticulturist, and considered our plum trees as bad as dead. But they are worth a good many dead ones, and have made good shoots this season, some of which are two feet long. The trees were set out in the spring of '46. It may be that the frozen state of the ground prevented the salt and brine from penetrating, and allowed it to be washed away before the opening of spring. H. W. **Crosby**. *Easton, Pa.*

BANKING UP THE TRUNKS OF TREES.

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As a subscriber and young farmer, I take the liberty of applying to you for information respecting some old trees, whose roots have become exposed by the washing of the water along shore, and which I am now about to cover with fresh earth, and build a wall to protect the sea from making further inroads. On the principle that covering the base of a tree with earth destroys it, I am apprehensive that the same may occur where the roots have been so long exposed as in this case, (say 10 or 15 years.)

If the above query comes within the range of your experience, please inform me through the pages of the Cultivator, and add to the much valuable information already obtained therefrom by

Your obedient servant, D. L. **Suydam**.

Remarks.—A difference between the roots and the trunk of a tree, is, that while the roots, though constantly immersed in water, will not absorb any more than the best healthy condition requires; the bark of the trunk similarly situated, soon becomes overcharged, and unless relief is afforded, decay follows. In small trees, and in branches buried as layers, this relief is obtained by the part itself gradually changing in character to that of a root. The older the tree becomes, the more slowly this change takes place, either from the nature of a trunk to a root, or vice versa. Hence caution must be used in banking the earth high round the stems of large trees.

The time required to convert the large roots of a full grown tree to the nature of the stem, is unknown to us. It may be questioned whether in the cases above-mentioned, this change has yet been more than partial; if it has not fully taken place, the hazard of banking up would be lessened. In order, however, to insure their safety, and to allow them gradually to assume their former character, it may be prudent to place small stone or gravel in immediate contact with the roots as they are covered, which, though it may exclude the light, will permit the surface to remain dry during most of the time, if an outlet below is provided for the drainage of these beds of stones or gravel.

The above inquiry has been accidentally neglected for a few months.

Winter Apples in Ohio.—In southern Ohio, a selection of good-keeping winter apples appear to be needed, quite different from the old standard sorts of New-England and New-York. The Baldwin, a good keeper in New-Engladd, is there only an autumn fruit. Would not the Newtown pippin, Northern Spy, English Russet, and Tewksbury blush, prove good keepers in Ohio?

Profits of Fruit.—P. Barry, of the Genesee Farmer, says that when in the garden of Geo. Hoadley, Esq., of Cleveland, the present season, the crop of a single cherry tree was sold for $10. The tree was eleven years old, and not larger than seven-year planted trees at Rochester.

The Norway Spruce.—Robert Nelson, of Newburyport, Mass., says that *manure* is almost death to the Norway spruce, which is most fond of sandy, or still better, of gravelly soil.

THE CULTIVATOR TO ITS READERS.

The present number closes the Fourth Volume of the New Series of The Cultivator, being the Fourteenth from its commencement; and according to our original terms, *all subscriptions*, except such as are paid in advance, *will expire with the year*. We cannot permit the occasion to pass by, without tendering our acknowledgments to our numerous friends and patrons who have kept us company through the year,—those who have so effectually aided us as contributors, and those who have so kindly assisted us in extending the circulation of our Journal. It has been a subject of gratulation to us, that notwithstanding the multiplication of agricultural journals, so many of our patrons have adhered to us for such a series of years, numbering, as we still do, among our staunchest friends and supporters, many who enrolled themselves on our list, when we first commenced the old Genesee Farmer in 1831; while the annual additions of new subscribers, from every section of our extended territory, prove that our efforts are not without the decided approval of the friends of improved agriculture everywhere; and now that the period of our mutual engagement is again closed, we are unwilling to part with any of our friends, and respectfully ask them to renew their subscriptions, and keep us company another year. We ask them, as soon as practicable, to authorise our Agent, or the Postmaster, to forward us their names for the coming year.

To our subscribers, and indeed to the agricultural public generally, the course and character of "The Cultivator," is too well known to need a word of explanation. Placed, by the unanimous consent of the farming community, at the head of the Agricultural Journals of this country, the extent and variety of its contents, its list of contributors at home and abroad, unrivalled for numbers as well as for practical and scientific skill, the superiority of its practical execution, and the number and excellence of its illustrations on every subject connected with agriculture, have all contributed to render it a favorite with all classes interested in the cultivation of the soil. This elevated standing it will be the uninterrupted effort of the conductors to maintain, and at no time has the means for doing this been more ample than at present. To extend the means of knowledge; to inculcate correct theory and sound practice; to furnish the reflecting with matter for thought, and the practical man with instruction immediately available, has been, and will continue to be, the great end of this periodical.

We are anxious to extend, or even double, the present circulation of "The Cultivator," because we believe that the best interests of the country would be promoted by such a result. But in doing this, we do not wish to interfere with, or occasion the loss of a single subscriber to any other agricultural paper. The field of labor before us is a broad one; and to all who are engaged in cultivating it, we cordially tender the right hand of fellowship, and wish them every success. There cannot be less than two million families in the United States, who would be benefitted far beyond the expense, by the receipt of an agricultural paper; and yet, it is believed, it would be a large estimate to say that one hundred thousand copies of such periodicals are now circulated. It cannot, therefore, be doubted that there is ample room for the labors, and for an extension of the circulation of all.

Our thanks are particularly due to Postmasters and to other gentlemen, in all parts of our country, who, eling an interest in the success of our agriculture, as the great source of national and individual prosperity, have kindly brought our work to the notice of their friends, and otherwise interested themselves in procuring subscribers. We respectfully ask a continuance of their kind offices.

To Correspondents.—We should do great injustice to our feelings, did we fail to tender our heartfelt acknowledgments to our numerous correspondents, by whose aid we have been enabled to give an interest and practical value to our pages, which could in no other way have been obtained. It will be seen, by the Index to our list of contributors, published with this number, that they amount to about three hundred, embracing gentlemen in almost every state of the Union, in the British Provinces of Canada and New Brunswick, and in England, Scotland, France, Germany, Holland and Italy. We know of no other periodical which can compare, in this respect, with "The Cultivator." We ask, and look confidently for a continuance of these favors, not only from those who have heretofore contributed liberally, but we ask those also who have, through our pages, enjoyed the benefit of the experience of others, and contributed nothing themselves, now to become contributors to the fund of information which we are dispensing to so large a circle of readers. We want facts in relation to every branch of American husbandry—the increase and application of manures—the tillage of the soil—draining and irrigation—the culture of all the various crops—the management of grass lands—the breeding, rearing, and feeding of domestic animals—the selection and culture of fruits, vegetables and flowers, &c., &c.—the making of butter and cheese—and all matters of interest to farmers' wives and daughters, as well as to the farmer and his sons. The experience and observation of hard-working, common sense farmers, on all these subjects is wanted; and we hope to receive such an abundant supply for our next volume, as will render it more valuable than any that has preceded it.

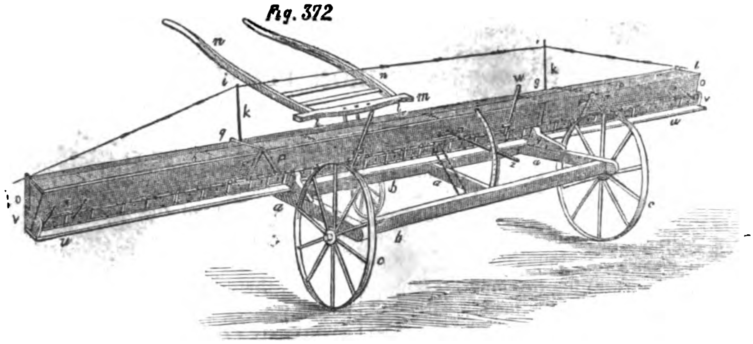
To Agents.—We complete our list of Agents this month. We have endeavored to make it as perfect as possible; still, there are doubtless more or less errors and omissions. Should any Agent, therefore, not find his name in the list, he will consider its omission accidental, and do us the favor to act as usual. If, as is probable, some of the Agents in the list, have removed, or decline to act for the ensuing year, we shall be greatly obliged to any of our readers who will supply his place, by taking upon himself the responsibility of making up a club of subscribers in his neighborhood.

☞ As we are dependent solely upon our local Agents for the annual renewal of subscriptions, the more we have of them the better, and we therefore invite all such of our readers as are disposed to aid us in extending the circulation of the "The Cultivator," so far to become Agents as to use their influence to procure subscribers for the next volume.

December.—This will be found to be the best month in the year to obtain subscribers to "The Cultivator;" and we trust our Agents will give as much attention to the matter as circumstances will permit.

☞ The Title-page and Index to the present volume of "The Cultivator," will be issued with this number.

Fig. 372



BROADCAST SOWING MACHINE.

In our August number we spoke of a machine used by **J. Delafield**, Esq., near Geneva, for sowing grain broadcast. Believing that machines of this kind may be introduced with advantage on many farms, we copy from a Scotch work, (*Stephens' Book of the Farm*,) the above cut, together with the following remarks:

"The Broadcast Sowing Machine has now come into pretty general use, especially in those districts where the arable system is under the best management, and on large farms is nearly superseding the process of hand sowing. It not only sows all the white grains, wheat, barley, oats, when sown broadcast, in a very uniform manner, and with any desired allowance per acre; but it serves in a superior manner for grass-seeds, in point of distribution, and, in the case of windy weather, is greatly superior to hand sowing. This last advantage arises chiefly from the low position of the discharging orifices, as compared with the height of the hand in sowing; but partly, also, from the more direct discharge of the seed from the machine; its velocity of discharge, likewise, and the distance it has to fall, being always uniform. The nice gradation of the discharge is one of its chief qualifications, for it may be adjusted to sow any required quantity per acre, between the lowest and the highest, that may be judged expedient, and in all cases, from the uniformity of the distribution, a considerable saving in seed may be effected."

The seed-chest is usually made eighteen feet long. This length rendered it inconvenient to pass gateways; and to obviate the difficulty, the chest is now made in sections, the middle part being nine feet, and the extremes four and a half feet each, so that it may be readily folded up to the width of nine feet. We omit a minute description of the machine, as our object is principally to call attention to the general plan. The machine used by Mr. **Delafield** is manufactured by P. **Seymour**, Jr., of East Bloomfield, Ontario county. It is probably as good or better than the Scotch one, from which our cut was taken. Particulars in regard to the construction of Mr. S.'s machine, can doubtless be obtained by applying to him.

EXHIBITIONS OF AG. SOCIETIES.

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New-York. Ontario County.—Show held at Canandaigua on the 12th and 13th of October. The weather on the first day was very unfavorable; but the show notwithstanding was such as indicated increased attention to the improvement of stock. There was a good display of cattle, among which were several fine Durham bulls, several yoke of good working oxen, and a good show of horses, swine, and sheep. The display of fruits, flowers, manufactures, specimens of mechanical ingenuity, &c., was large.

Wayne County.—Show at Lyons, Oct. 6th and 7th. From the reports of committees, published in the *Sentinel*, we infer that the show was in all respects creditable to the farmers of the county. There appears to have been a large display of stock; and from the list of premiums there seems to have been no deficiency in the other departments.

Clinton County.—Show held at Keeseville on the 5th of October. The *Keeseville Republican* says—"the universal expression was that in the extent and variety of productions exhibited, the number of people present, and the spirit and animation which characterized the whole proceedings, this fair far exceeded anything of the kind that has ever before been held by the Society."

Queens County.—The sixth exhibition of this Society was held at Hempstead on the 8th of October. The weather was very unfavorable. The *Inquirer* says: "The rain commenced falling in torrents at an early hour, and continued till evening. Under such circumstances it is remarkable that there should have been so much for exhibition as there was. The stock was generally good, some parts fine. Other parts of the show were highly creditable to the county. The crowd in attendance was great—being from all parts of the county, many from Suffolk, Kings, New-York city, and some from more remote places still."

Connecticut. Middlesex County.—Show held at Middletown. From the report of the committees, published in the *Sentinel and Witness*, we learn that the exhibition was large—fully equal, we presume, to any former year. We notice, by the awards of premiums, that the use of bones, as manure, of which some account was given last year, has been continued with the same favorable results the present year. **Enoch Cox** obtained, it is said, twenty-three bushels of rye per acre, by the application of twenty bushels of bone-dust, on land which, the committee say would not, in their opinion, have produced more than five bushels per acre under "ordinary management." The address to this Society was by Rev. F. J. **Goodwin**. . We shall notice it more fully hereafter.

Ohio. Trumbull County.—We are indebted to our friend **George Hezlep** for an account of this show, which was held at Warren on the 13th and 14th of October. This was the second exhibition of this Society, and appears to have been well attended, and the display of stock of all kinds, horticultural productions, manufactured articles, &c., is represented to have been large, and of a character which did honor to the citizens of the county. The address was by Prof. E. P. **Barrows**, of the Western Reserve College.

Pennsylvania. Susquehannah County.—Show held at Montrose, October 19th. From an account published in the Montrose *Register*, it appears that the exhibition was interesting and encouraging. A premium was awarded for a crop of 119¾ bushels of Indian corn, produced on one acre; also for a crop of ruta-baga, 520 bushels produced on half an acre.

THE CAST IRON PLOW.

AN article has been published in the last volume of the Transactions of the New-York State Agricultural Society, giving statements of the history of the Cast Iron Plow, which contains serious errors. As the improvement of the plow has a very important connection with the history of agricultural improvement, it is proper that these statements should be noticed. Although the volume has been published some months, the article alluded to escaped observation until very recently.

The author of the article, says—"Thus, about the year 1790, the plow in England was perfected to the point that it was made entirely, in its body, of cast iron. A single improvement yet remained to be effected; a greater hardness in the share; and this was made by Robert Ransome, [of Ipswich, England,] who in 1803, took out a patent for *case hardening*, or what we term *chilling* the points and edges of the share." "It will thus be seen that the cast-iron plow is wholly an English invention."—"We now come to a very important improvement in the material and manufacture of plows in America, which so cheapened their construction.—This important improvement which I allude to, is the cast-iron plow complete," &c. "*a* Mr. Newbould, an ingenious farmer"—"to him should be awarded the honor of its *introduction*." Yet the same article states, "he took no interest in getting it into general use."

The same article further states, that "Peter T. Curtenius, of the city of New-York, kept plows for sale as early as the year 1800, the shares of which were of cast-iron; but whether these were got up by himself or made from Mr. Newbould's patterns, I have not yet been able to ascertain." "These plows were highly approved of, as may be seen by reference to an article on the subject by Col. John Smith." This article is in the old N. Y. Transactions—the volume is before us, and these are Col. Smith's words:—"It is cast in the *form of a Dutch share*, after the best model that could be procured by the society, [and therefore had nothing to do with "Newbould's patterns,"] with this exception, that the edge is not complete, and not so wide by about three inches as it will be when finished by *the false edge, which is made of wrought-iron and steel, and fastened on with rivets*"!! "They may be had of Mr. Peter T. Curtenius, in New-York, either with or without *the edge, which is made of wrought-iron and steel*." In other words, it was *a cast-iron Bull plow*, with a wrought-iron and steel edge, neither more nor less, as every old farmer acquainted with the old Bull plow, must see at a glance.

Again, we are told, "Mr. Peacock, of New-Jersey, made a great improvement in plows, as early, I am informed, as 1805, by substituting the cast-iron for the wooden mouldboard. The form of this, however, and the manner of putting his plow together, were very imperfect." The article further adds, "In the year 1808, Peacock's plow was so far improved as to be made, share and mouldboard, both of cast-iron." This appears to be quite an error. Harris, in Cayuga Co., either manufactured, or kept the Peacock plow for sale, in 1814 or 1815, and we have the authority of some of the most eminent farmers of that county, that these plows had a wrought share, like the old Pennsylvania plow.

Again, "Mr. Edwin A. Stevens, of Hoboken, New-Jersey, took up the plow in 1817, and for nearly four years, devoted his ingenious talents to its improvement. Mr. Stevens was the first in this country to make use of the process of cold chilling the base of the land-side and lower edge of the share—a most important improvement, which was also embraced in his specification for a patent." This patent was obtained in 1821.

Now, there is ample evidence, which can be furnished from the best witnesses now residing in Cayuga county, N. Y., that Jethro Wood chilled his cast-iron edges long before, but he appears never to have thought of patenting that process.

Such errors as these, must seriously weaken the confidence of the reader in the accuracy of other statements in the article.

An object of the writer appears to be, not only to deprive Jethro Wood of all merit, but to represent him as a wilful imposter, which is done in these words:—"His [Newbould's,] was undoubtedly the first cast-iron plow ever used in the United States, and to him should be awarded the honor of its introduction, although thus far it has been generally accorded to Jethro Wood, of New-York, who had the shrewdness to get out a patent for one in 1814. He undoubtedly derived his idea from Mr. Newbould—who took no interest in getting it into general use—or from those of English manufacture, and was never entitled to the least merit as the originator or improver of the cast-iron plow. Mr. Newbould made his improvement without any knowledge of the progress in the same direction, in England." Why does the writer extend this charity to Newbould, but deny it entirely to Wood? No evidence for this heavy charge is given. Such random assertions should not be made by an impartial historian.

But what are the facts of the case? Fortunately, we have evidence of the very strongest character,—evidence which stood the test at the final trial of Wood's patent,* before the United States Court, at Albany, in 1845, where the following points in the invention were triumphantly sustained;—and which prove beyond cavil, that Jethro Wood was substantially the inventor of the modern improved cast-iron plow.

1st. The form of the mould board;

2d. The construction of a standard of cast iron for connecting the mould board with the beam;

3d. The cast shoe or edge, which is fastened without screws;

4th. Fastening the plow-handles by means of cast loops;

5th. The manner of fastening the landside to the mould board without screws.

These were mainly the improvements which have so cheapened the construction of plows, "that those for one horse, strong and well made, after the most improved patterns, can now be had in New-York at $2 to $4 each, and a two-horse plow from $5 to $7." These improvements, by placing the best plows within the reach of the smallest farmer, have been of incalculable benefit to the country, and been worth millions in the aggregate—yet we are told in this article, that Jethro Wood "was never entitled to the least merit as the originator or improver of the cast iron plow"!! What confidence can the reader have in the accuracy of such a history, where mere assertion, tending to injure the memory of a worthy man, as well as eminent benefactor to his country, is placed in direct opposition to incontrovertible evidence, bearing the test of the most rigid scrutiny, in a United States Court.

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* This patent was obtained in 1819—with his previous patent of 1814, no one has had anything to do for nearly 30 years.

It has often been the case with eminent inventors, that their improvements are first opposed and ridiculed, and when triumphant, they are denied the merit. It was so with Fulton—it was so with Whitney—and it has been so with Jethro Wood. One of the hardest things he had to overcome was the prejudice against "*pot-metal!*" Nearly all his friends discouraged him—they were afraid of the shoe, and afraid of the projection connecting the mould board to the beam. He was even publicly insulted for intimating that *pot-metal* would stand when used as a plow-share. One of his friends and neighbors had so little confidence, that he tried for a long time to break one of the first cast edges or shoes, by running it against fast stones and the hardest gravel banks. The discredit, as it was then supposed to be, was fully accorded to him—the merit, as it is now found to be, is denied him.*

In the article before us, we are told that in 1796, Newbould made "the cast-iron plow *complete*." Yet we are told that Peacock made "*a great improvement*" in 1805, "by substituting cast-iron for the wooden mouldboard." Again, "Robert Ransom took out a patent for *case hardening* in 1803." Edwin A. Stevens did the same in 1821. Yet we are told the latter is "a most important improvement." These striking inconsistencies appear to have originated in a wish to give credit to all; but why is the evidence, which to every properly informed person is as clear as light at noonday, that Jethro Wood contributed more than all to the effectual introduction of the cast plow, thrown entirely aside, and mere assertion substituted?

These remarks are made, not for controversy, but solely for the purpose of correcting the erroneous history of the plow, which, it is to be regretted has found its way into the Transactions of the State Agricultural Society, and for rescuing from most unjust censure the memory of a worthy man, who spent the prime of his life, in the face of great difficulty and prejudice, and with little pecuniary recompense, in introducing one of the most valuable improvements of the age.

☞ Will the Far. Cabinet, and other papers who have copied the article from the Transactions, please copy the substance of the preceding facts. J. J. T.

THE FARMER'S NOTE BOOK.

Topping Corn.—Near the road leading south from Auburn, I lately observed several fine fields of Indian Corn, apparently belonging to different farmers, which was *topped!* I had long since supposed that the wastefulness of this old practice was generally understood in western New-York; but it seems that a little more admonition may be useful.

I remember that in years long gone by, it was a rule not to begin to top till the tassels or stamens were withered: for observation had taught us that if that part was removed too soon, there would be no corn; but the loss sustained from stripping the leaves was not so evident, because there was always some grain, and four-fifths of a crop was sufficient to conceal the damage. At length, however, *experiments* were made, and these showed so great a loss that none but the ignorant or the obstinate continued the practice.

Ch. Woodson, of Virginia, had the tops and blades taken from several rows of Indian Corn, leaving the same number of rows untouched, and discovered when the grain was harvested, that the *corn* of the unmutilated part, weighed more than the *corn and fodder* put together, of the part that was topped and bladed. The proportionate loss is not given, but the language is emphatic, and he adds, "the whole labor of gathering and curing the fodder (no inconsiderable item,) was entirely lost."

John Lorain, of Pennsylvania, topped and stripped two rows of corn, leaving the row between them untouched. This last row yielded more than *nine bushels and a half*, and the average of the other two was rather more than *seven bushels and a half*. At this rate, when he had *thirty-eight bushels* to the acre *untopped*, he had *thirty bushels* to the acre when *topped and bladed*.

William Clark, jr., of Massachusetts, has made a more direct statement; and says the loss was "*twelve bushels and forty-six pounds* per acre," from which he deduced that "about *twenty per cent., or one-fifth part of the crop*, is destroyed by cutting the stalks in the way they are usually cut." D. T. *Cayuga Co., 10th month* 25, 1847.

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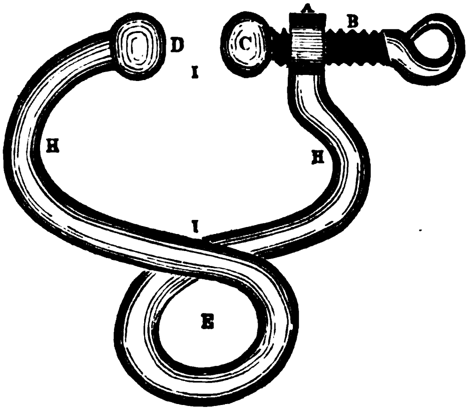

Messrs. Editors—In looking over the February number of the Cultivator for 1844, some time since, I found a description of a "contrivance for the prevention of accidents from unruly bulls," in which description you mention "a strong iron or steel ring, which opens with a hinge and screw and passes through the bull's nose." This suggested to me a contrivance of which the above cut is a representation; and I had one made which answered the purpose so well, that I take the liberty of forwarding you a description with the cut, in order that you may give it an insertion in your valuable journal, if you think it might be of advantage to any of your subscribers.

Take a piece of half-inch round iron, 15 inches long, and bend it as represented in the cut; have a nut cut at A, and the screw B to fit the same, by which screw the balls C and D, after being introduced into the animals nostrils, are brought near each other, and firmly secure the "Detached Bull Ring," in the animals nose. The best method of leading "is by a strong stick, like a hoe handle," with a short chain at one end, to be attached to the ring at E.

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* On the last page (332) of the 4th volume of the Memoirs of the Philadelphia Society for promoting Agriculture. is Barnard's advertisement, with a plate of Wood's first patented plow annexed. He says:—"The mould board, *share*, and landside, are cast iron. The cast shares are furnished at 60 cents each, and *warranted* not to break, even in the most stony soil." Wrought shares were at $2. This volume bears date 1818, about one year *before* Wood's last patent.

This would indicate that the cast share was then new, and that Newbould's and Peacock's pretended cast shares were unknown within twenty miles of where the former lived; although his plow had been invented twenty-two years.

The advantages of this mode are—that you do not cut or bore the cartilage in the nose, as in the usual way of ringing bulls—the ring is never in the way of the animal while feeding—and you use the same ring in leading or managing any of your stock. JOS. WM. RUSSELL. *Cape Girardeau Co., Mo., Oct.* 25, 1847.

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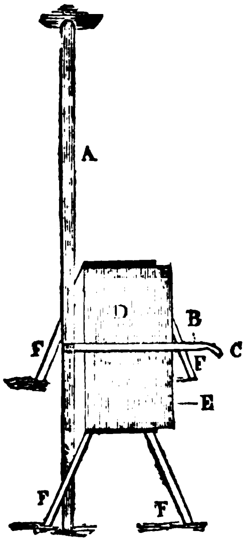
"**DOUGH KNEADING MACHINE.**"—In the August number of your valuable paper, ("The Cultivator,") which I as a subscriber have the pleasure of reading, I notice the offer of a "Premium" by R. W. Jr., for "an effective machine for kneading and mixing dough, that shall be simple in its construction; easily cleaned, to occupy a small space, durable, and not to exceed $5 in cost, for one to work 5 lbs. of flour at a time;" and I will add to the above requisites,—one not likely to get out of order, no matter how much it may be used, and also one that would enable the operator to work 10 lbs. or more of flour at a time, should they desire it.



REFERENCES.—A, main shaft, or upright post; B, lever, which passes through the upright post at the top of the bench; D, the bench, standing by the upright post; E, biscuit board, resting on the bench, and prevented from slipping out of its place by strips of board nailed across the top of the bench at each end of the biscuit board; F F F F, legs of the bench.

The annexed cut is an attempt to represent the one which has been in use in my family more than two years, without its being in the least damaged in any of its parts. The cost of the one here attempted to be figured and described, will not be over *two dollars*, built in the neatest manner, and of the best materials. Mine was made and put up in less than half a day by one person.

It consists, first, in an upright shaft or post, four inches square, to reach from the floor to the ceiling, or joist at one end, or side of the cook room, the bottom and top ends of which are to be rounded, for the purpose of fitting into sockets of wood at bottom and top; a piece of good board of hard wood, with a 1½ inch auger hole through it, makes a good socket, one at bottom and one at top of shaft, and secured. The shaft must be loose to allow of being turned about.

The bench may be about 2½ feet long, 15 to 16 inches wide, and three inches thick. The legs of the bench may be of a sufficient height to suit the operator say about three feet from the floor to the top of the bench. On the top of the bench rests the biscuit board, secured temporarily to its place by strips of board nailed across the bench at the ends of the biscuit board, to prevent it from slipping while kneading the dough.

The lever is to pass through the upright post at a level with the top of the bench, by a mortise, 1¼ inches wide by 5 or 6 inches long, and secured in its place by a small iron pin; the size of the lever may be 2½ inches square, and rounded on the lower edge, for the purpose of cutting or pressing the dough; the end of the lever should be made to pass through the upright post loosely, so as to allow of an upward and downward motion. The post being loose in the sockets, allows of a forward and backward motion, the dough forming the fulcrum upon which the lever is made to operate, by taking hold of the outer end of the lever, (which should be reduced to a proper size for the hand, say 1¼ inches in diameter,) raising it up and bringing it up towards you, then pressing it down upon the dough and pushing it from you in the same motion, which cuts the dough down to the biscuit board, and by taking small parcels at a time, will soon thoroughly knead a large batch. The flour at first mixing would be better stirred up somewhat in a tray or wooden bowl, or tin pan, for the purpose, (which every family have in their possession,) and after having been so mixed in part with a large spoon or ladle, it may be turned out upon the biscuit board. The lever should be of hard smooth wood, to admit of being easier cleaned, which is easily done by taking out the iron pin that secures it in the post. The biscuit board should also be taken out and put away when not in use.

With the foregoing directions, &c., I am persuaded almost any person could rig up a good machine, which will save the female portion of the family a great deal of hard labor. The bread will be better and cleaner, as the hands need not be put into the dough, except for the purpose of forming the biscuits or loaf, as the case may be. I therefore respectfully present it *to all* the "good house-wives," whether "working women" or not. I would remark one thing further—that we have had no *sodden* bread since the above machine has been in use. J. A. C. *Baly's Neck, Talbot County, Md., Oct.* 9, 1847.

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HORSE-POWERS.—For the information of your correspondent, T. B., of Pleasant Hill, Ala., I would say that Warren's Horse-power can hardly be made, without very material alteration of the machinery, to gin cotton, either by the saw or roller gin, the velocity being very much too great. The best and cheapest horse-power for his purpose that I think he can find, is the Railway Horse-power, made by Mr. Ezra Whitman, Baltimore, at $75 for one horse, and $100 for one for two horses. The only objection that I find to it is, that the horses and mules ought to be shod, which is rather inconvenient in our flat country, where few or no smiths can shoe. But patent shoes can easily be purchased, and an ingenious negro blacksmith, or even a carpenter can put them on. Besides the horse-power costing as little, if not less, in first cost, the very material item of a building 25 or thirty feet square, and 1½ or 2 stories high, is also saved, as the Railway Horse-power can be worked in any shed or room of moderate size, and is certainly of equal, and many think (I myself among others,) of much greater economy of labor. Some who have used both this and the Lever or King-post power, maintain that with a Railway power, two horses will do as much work as four with the other power.

It is necessary, however, in order to adapt Mr. Whitman's power to ginning cotton, to have, instead of the large driving drum, usually furnished with it, of four or five feet diameter, one of 18 or 20 inches, which will give about the velocity he requires, and will also answer, when he has finished ginning cotton, to grind corn, drive Hussey's corn and cob-crusher, or Goldsboro's corn-sheller, which is an effective machine, as I can testify from experience, shelling, it is said 130 bushels clean corn per hour, and is fed by the basket of ear corn at a time.

Lucerne.—I would also state, that lucerne has entirely failed in all the experiments I have heard of hereabouts. The only grass that I have found to stand our climate, is the orchard grass, and from limited but repeated experiments, I am pleased with the spurry, (*Spergula arvensis*,) for winter and early spring fodder, or grazing, but it will not grow at all in the summer.

Mutton.—I do not agree at all with you, that Cotswold or Leicester would improve the quality of mutton and wool, unless the mutton be raised for sale. For eating, no mutton, in my humble opinion, (and I have eaten some mutton in my travels,) will compare for fineness of grain, and flavor and juiciness, with Merino, or grade Merino, and I have no doubt that as much Merino mutton or wool can be raised upon the same quantity of pasture or feed, as of any other breed whatever, and the wool does not require any praise at my hand. Besides, your Maine correspondent, I. McG., is in the immediate neighborhood of the best flocks of that breed.

Grasses for the South.—The Muskeet grass that was introduced into this state a few years since, proved, I believe, to be the *Holcus lanatus*, well known in Europe. As far as my experiments—and they have not been few—have gone, the best and only grasses that it is worth our while cultivating in the south, are rice, corn, oats, wheat, rye, and barley, and if all the time, money, and labor, that have been wasted in trying other grasses, had been spent upon the 2d, 3d, and 5th of the above list, our horses, hogs, &c., would have fared better, and our pockets would now be rather better filled. I am certain that mine would be. Rob't Chisolm. *South Carolina*, 1847.

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Rotation.—Mr. J. D. Burditt, of Norwalk, Huron county, Ohio, sends us the following plan for a rotation of crops. He says—"Most of my soil is what would be termed a clay loam, a small part of it a tenacious clay. I wish to ask whether the following rotation would be a good one?

First year, corn, on sod, manured and plowed in the spring, about five inches deep. In the fall, after the crop comes off, cross-plow some two or three inches deeper than plowed in the spring, that the action of the frost may pulverize a portion of the subsoil.

Second year, oats or barley, or both, with three parts of clover seed to one of timothy.

Third and fourth years, mow and pasture.

Fifth year, green fallow with peas or beans, followed by wheat with timothy and clover, half and half,—to remain in grass three years; then commence another round with manure and corn, as before.

Although my land is pretty good for wheat, I prefer a mixed plan of farming, to any particular branch exclusively."

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Morgan Horses.—The following extract from a letter lately received from Mr. Benjamin Thurston, of Lowell, Mass., is deserving attention. Mr. T. has had great opportunities for observation in regard to horses.

"Twenty-two years since, I bought several of the old (first) Morgan's colts. They were raised by Mr. Goss, of Vermont, who was at one time the owner of the old horse. I found they showed traces of better blood—their action was finer, they moved more easily and gracefully, and could endure more than most of those I have had since. They had a bony head, with sharp ears, and were close, but *pointed* horses. The difference between the former and many of the present Morgans, I attribute to the French blood in some of our mares, from which the latter have come. I have noticed that *Black Hawk's* progeny, when there has been French blood in the dam, have not quite that simplicity of action which those have whose dams have better blood. Some of those partaking of the French or Canadian blood, have, as I think, a little too much action—or rather a *labored* motion, which is apt to make them leg-weary in a long day's drive."

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Breeding Animals.—Joshua R. Lawton, Esq., in his late address before the Berkshire County Ag. Society, observes:—"What a wonderful triumph of human reason and power, that the animals given and subjected to man by the great Author of Agriculture, can be moulded and fashioned to his liking, as the clay is fashioned by the potter! Form and figure, size and power of bone and muscle; adaptedness to the peculiar service required; kindness and docility of disposition, and even agreeable countenance and expression, by patient and skilful breeding, can be successfully attained."

In relation to the same subject, Mr. S. B. Colby, in his address published by the Washington County (Vt.) Society, says:—"It has been, and perhaps still is, the belief of many, that *care* and *keeping*, are the true sources of improvement in stock. That the qualities of the animal are determined more by the food that supplies the stomach, than the blood that flows in the veins. That keeping, care, and climate, influence the individual is true, and in the course of centuries, characterize the species; but it would be weak policy to decline the use of standard specimens of animals, which by selecting the good and rejecting the bad, for a long time, are now offered to your service, already finished to a high degree of perfection. Who can hope to transform our native cattle into Durham, Devon, Ayrshire, with their perfection of form, deep chest, straight limb, and majestic proportion, with the mere instrumentality of turneps and clover? And who expects to create the peculiar compact shape, comeliness and strength of the Morgan Horse, by even the most bountiful allowance of *hay and grain?* As well by diet and education may the 'Ethiopian change his skin, or the leopard his spots.'"

Influence of Railroads.—Hon. J. M. Niles in his late address before the New Haven County Agricultural Society, makes the following judicious remarks in relation to the influence of railroads:

"It has been supposed by many, that the system of railroads and canals, by bringing the products of the West into competition with those of the Atlantic States, would operate injuriously to the agricultural interests of the latter, and reduce the value of land. But on a full development of that system, the result will be otherwise. Were agriculture and commerce the only great interests of our country, this consequence might have followed. But manufactures, the other great interest, supply local markets for the farmer; and the railroad system is already exerting a powerful influence in establishing manufactures in the interior, at points remote from tide water; and thus creating local markets for those products of the farm which would not justify transportation to our commercial cities on the seaboard. Whilst railroads bring the great staples of the West into competition with those of the Atlantic States, they enable the latter to send to market at a good profit, a great variety of products, which could not otherwise be done, and which will not bear transporting from the western states. And this system, by its influence in evolving the various resources of the country, and increasing its wealth, exerts a favorable influence on agriculture generally, and more especially on sections contiguous to our commercial towns and manufacturing districts. Whilst it brings the flour and provisions of the West into the market on the seaboard, it enables the farmers in the Atlantic States to avail themselves of the markets, where local ones do not exist, for hay, milk, vegetables, fruit, and various articles, which, were it not for those facilities, would bear transportation a few miles only."

ANSWERS TO INQUIRIES.

Red Cedar.—"Subscriber," Ontario county, N. Y. We are not in possession of any information in regard to the cultivation of this plant for hedges, essentially different from what is given in our May number, p. 164.

Spiked Roller.—H. A. W., Providence, R. I. This implement is sometimes used on sward-bound grass-grounds, but we do not know where it is made for sale. A harrow with thin, sharp teeth, answers as good a purpose as the roller.

Breed of Hogs for Early Fattening.—H. A. W. The Suffolk is unquestionably a good breed of hogs to kill young. They would give good weight at six months old. (See Cultivator for March last, p. 94, 95.) A cross of the Berkshire and grass breeds would do well.

Breed of Hens for Laying.—The *top-knot* varieties, known as Polands, silver and golden top-knots, &c., are good for laying. We should prefer these, or a cross of them and the game fowl, for eggs, merely.

Agricultural Papers at Philadelphia.—"A Subscriber," Brooklyn, L. I. The only agricultural paper published at Philadelphia, so far as we know, is the *Farmer's Cabinet*, a monthly octavo, of 32 pages, published by Josiah Tatum, North Fourth-street, at one dollar a year.

Preserving Eggs.—R. G., Connecticut. We have no more than what we have published on this subject, except the following: H. A. Pitts, of Winthrop, states in the *Maine Farmer*, that he has tried many methods of packing eggs, and that the best mode is to put them in charcoal. The charcoal is pounded and the eggs packed in it in the same way that it is usual to pack them in salt. They keep perfectly good, and when used after several months, were not to be distinguished from those just layed.

Storing Sweet Potatoes.—In answer to a correspondent who requests information in regard to the keeping of sweet potatoes through the winter, we give from Norman's Southern Ag. Almanac, the following:

"The sweet potato should not be gathered till there has been frost sufficient to kill the vines. We have always hitherto stored in *pumps* or *cocks*, and have had abundance of fine yams until mid-summer. Whilst the potatoes are being gathered, two or three trusty old hands are engaged in preparing the pumps, hauling a quantity of dry crab-grass, previously gathered, and of dry corn-stalks. A piece of high dry ground, under good fence, is necessary. A circular bed is formed, six or seven feet in diameter, by drawing the earth from the middle all around, making a saucer-like bed. In the centre of this, a small triangular chimney, made by nailing together three pickets, six or seven feet long and as many inches wide, is set on end, and the potatoes are carefully emptied round it from the baskets, being careful not to bruise them, and to leave a foot in length of the chimney protruding above. A sprinkle of fine, dry straw or crab-grass hay on the bottom, is necessary. Build the potatoes up as high as possible, so as to form a steep-sided cone. Over this, put a thin covering of dry crab-grass; then cover with cornstalks, carefully laid on, with their butts on the ground, to the thickness of five or six courses. The whole must then be covered with earth; at first, a light covering, to be increased by another coat when cold weather sets in; smoothing off each time by patting with the spade. The earth to cover with, is taken from around the pump, forming a ditch, with an outlet from which the water drains. The warm, damp air generated by the sweating of the roots, escapes through the chimney, which may be closed with a wisp of straw, if the weather sets in very cold. A slight roof of clapboards should be placed over each pump, not resting upon them."

Preparation of Manure.—O. O., Haddam, Ct. If the fermentaion of manure takes place in such circumstances that the valuable portions are not thrown off and wasted, we have no doubt that it is an advantage. At any rate, its action is rendered more immediate and effective. It may have been on this account that effect of the manure in the first case cited by you, was so conspicuous.

Ellsworth's Syphon Ram.—F. R., Milwaukie. We hope to be able to answer your inquiry shortly.

Stalls for Cattle.—R. D. H., Nelson, N. Y. We would refer you to the June number of our current volume. Feeding boxes to stand in yards, for feeding coarse fodder and straw, may be made by fastening planks five or six feet long, to four upright joists or posts, so as to form a square box, three feet high. A bar eighteen to twenty inches above the planks, will serve to keep the fodder from being thrown out by the cattle tossing their heads.

Disease in Swine.—J. A. F., Newport, N. Y. We think it probable that the disease which has attacked your swine is the *mange*. The malady is identical with the *scab* in sheep, and the *itch* in man. Mr. Youatt, in his work on swine, lately published, says, "Where the mange is recent, a tolerably strong decoction of tobacco, or digitalis, will often prove an efficacious wash for the diseased parts, or a solution of corrosive sublimate; but if the eruption is of long standing, and has degenerated into scabs, a solution of arsenic, in the proportion of one ounce to a gallon of water, or, what is still better, sulphur and mercurial ointment in the proportion of an ounce of the former to a drachm of the latter, carefully and thoroughly rubbed into the skin, must be resorted to."

Raising Forest Trees.—J. W. C., Springfield, Mass. The walnut and chestnut must be planted as soon as they are out of the hull, or kept in moist earth till it is convenient to plant them. The "seed of the oak" (acorns) may be kept for some time in a damp situation, but should not be allowed to shrink much before being planted. The white oak is the most valuable of this family, and of the hickories, the soft-shelled or "shag-bark," is best. The white pine is readily raised from seed. There are many plantations in the eastern part of Massachusetts, produced in this way. The seed must be gathered as soon as the cones drop, or the cones should be gathered and placed under cover till the seeds will drop out. If they open in the woods, squirrels, mice, and birds often get the seeds. The seeds should be put in the ground as soon as practicable after they are obtained.

Locust for Timber.—E. Q., Salubria, N. Y. The species of acacia, which is preferred for timber, is the yellow locust as commonly called. It is best adapted to light or loamy soils. The seed may be obtained of most seedsmen. They may be sown in spring in beds, as beets or other vegetables are sown. They may be transplanted from the seed-bed when a year old, and placed in rows as apple-trees are in nurseries; and when they attain to a proper size, which will be in two or three years, may be planted permanently. They require to be placed in hot water before being planted, in order to soften the hard covering with which they are enveloped, and insure their immediate germination. Pour the water on the seeds, and let them remain till the water is cool.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received during the past month from F. R., J. M. Crook, B., P., J. A. F., E. Hammond, D. T., Observer, A Subscriber, J. W. Russell, Robt. Chisolm, John Barber Burnett, F. Holbrook, E. Quin, H. W. S. Cleveland, Reader.

Books, Pamphlets, &c., have been received as follows:—*New England Ag. and Hort. Almanac*, for 1848, by F. Trowbridge, New Haven, Ct.——*Address of* T. F. Bowie, Esq., before the Prince George's Co. (Md.) Ag. Society, Oct. 15, 1847.——*Ewbank's Hydraulics and Mechanics*, Part I, from the Publishers, Greely & M'Elrath, Tribune office, New-York.——*Address of Rev.* F. J. Goodwin, at the Cattle Show of the Middlesex Co. (Ct.) Ag. Society, and the Reports of the awarding committees, from Wm. Makinster, Esq.——*Address of* Harman C. Westervelt, at the Plowing Match of the American Institute.

The Cultivator for Agricultural Societies.—Nearly a thousand copies of "The Cultivator," have this year been distributed by Agricultural Societies—in part as premiums, and in part to members of said Societies. The Rhode Island Society for the Promotion of Agriculture, the Chittenden and Caledonia Co. (Vt.) Ag. Societies, the Hartford Co. (Ct.) Ag. Society, and the Dutchess Co. Society in this State, each supply their members with an agricultural paper. A large number of other Societies distribute the annual volume of "The Cultivator" as Premiums; and we would suggest to managers of Agricultural Societies generally, whether they might not materially advance the objects they have in view, by distributing either the bound volume or the numbers as issued monthly of "The Cultivator," as Premiums. The bound vols. will be furnished to Ag. Societies at 92 cts. each, and the monthly numbers at 67 cts. per year.

Prepared Guano.—We have received a circular in relation to an article under this name, offered for sale at S. F. Halsey's Steam Mills, 62 Vesey street, New-York. We have no knowledge of the article except what is to be derived from the paper above alluded to. We can only state, therefore, that the "prepared guano" is offered at one cent per pound, and that it is asserted that the preparation is such as to prevent the loss of the ammonia, which in the common guano is sometimes wasted without benefitting the crop to which it is applied.

Mr. Taintor's Imported Merinos.—We had lately an opportunity of seeing the Merino sheep imported in 1846, by John A. Taintor, Esq., of Hartford, Ct. In procuring these sheep, Mr. T. spared neither pains nor money. He personally examined the most noted flocks of France and Spain, and made his own selections, whatever were the prices demanded. His principle object was to procure such sheep as were calculated to produce the largest quantity of wool of a medium quality, this being in his opinion the class of sheep from which the most money could be realized by farmers in general in this country.

On looking at these animals, we were first struck with their extraordinary size, they being much larger than any sheep of the Spanish race that we have before met with. Some of the ewes weigh about 200 pounds each. The symmetry, too, of some of them is quite remarkable—their straightness and breadth of back, and fullness of chest, almost equalling the best English breeds. Their wool is uncommonly close, and every part of the body is thickly covered. They were not washed at the last shearing, but their fleeces as taken off, averaged 16 pounds each—of one year's growth. There is but little difference in the size or weight of the full-grown sheep; but in respect to shape and evenness of fleece, there appears to be some variation. For ourselves, we should decidedly choose those of round forms and smooth skins, in preference to those with large dewlaps, ruffles, and wrinkles; being confident that the superior quality of the fleece of the former would more than balance in value any deficiency in its weight.

Mr. Taintor has yet no ewes for sale. He meets with a ready sale for all his ram lambs at satisfactory prices. If judiciously used, their blood will be a valuable acquisition to the flocks of this country.

Shaker Barn at Hancock, Mass.—The Society of United Brethren, or "Shakers," at Hancock, Mass., have a large circular stone barn, which is justly regarded as a curiosity. In company with Wm. Bacon, Esq., of Richmond, we lately made a call at the Hancock village, and took a short look at this barn. It was built in 1826, is 300 feet in circumference, and 90 feet in diameter on the inside. The walls are of stone, 28 feet in height. The entrance for loads is on the second story. The bay is in the centre. The teams on entering pass along an avenue between the bay and the wall—the loads are discharged, and the teams go out at the same place they went in. Twenty-five loads or wagons can be taken in at one time. The bay will hold 400 tons of hay. The stalls for cattle and horses are on the first floor, and are arranged in a circle corresponding to the shape of the building. The animals stand with their heads towards the centre of the barn, and are handily fed from the bay. There are stalls for 75 head of cattle. The barn is substantial and convenient, but not quite as convenient, we think, as the Shaker barn at New Lebanon, described in the Cultivator for 1846, page 305.

Devon Bull Calf for North Carolina.—We are informed that J. H. Snow, Esq., of Raleigh, N. C., purchased a fine Devon bull calf of Mr. Washbon, at the late State Fair, at Saratoga. We should have noticed the purchase in our October number, had it come to our knowledge.

Fair at Hartford, Ct.—We mentioned last month that the arrangements for the in-door part of the late show and fair at Hartford, were planned and executed with much judgment and good taste. We cannot forego the opportunity to mention one object in particular, which besides being very beautiful in itself, gave great effect to the general display, and was much admired by the thousands in attendance. It was a miniature cottage and garden. The cottage was in the Gothic style, perfect in design. Its roof and sides were covered with green moss. It stood in the centre of the garden, through which a neat avenue led to the entrance. The garden was laid out in such a manner as to represent a fruit and flower garden of the most complete kind. It had its regular divisions, each devoted to the culture of its appropriate article. It had its winding walks, shady arbors, and rustic seats, and more than all its *fountain*, from the centre of which a pretty little jet was constantly playing. From the midst of the shrubbery and flowers, was heard the merry singing of birds, rendering the whole a charming scene.

The Barberry Bush.—From an article translated from the French in the *Horticulturist*, it appears that a man had a field of grain surrounded by a hedge of barberry nearly 600 feet in length, and that the grain of this field was never affected by mildew during the fourteen years the hedge remained. It is also stated that in the Royal School of Alfort, several experiments were made in 1815 and 1816, the results of which were to place beyond a doubt the impossibility of the injurious influence of this shrub.

Indiana Farmer.—The Rev. **Henry W. Beecher**, the editor of this work, having received a call to the pastorship of "the Plymouth Church," in Brooklyn, has removed from Indianapolis to that city. Mr. B. has done much during his residence in Indiana to excite a taste for horticultural pursuits, and to advance the rural interests of that section, and we hope his removal to the city, will not cause him to abate his interest in these matters.

Hartford Repository of Arts.—The Hartford County (Ct.) Agricultural Society have established a **Repository of Arts**. Its design, as expressed in the circular issued by the society, is—"To open a store-house, wherein models, drawings, designs, specimens and descriptions of every improvement in Agriculture, in Manufactures, in Mechanism, in the Arts, in short in anything and everything which finds a name and place of utility among us, may be exhibited for the benefit of all."

The directors of the institution solicit contributions of all articles of usefulness, to be deposited in the place which has been provided for that purpose. They will be received and exhibited free of charge to the owner. "To each article, in some conspicuous place, will be attached the card of the inventor or proprietor, showing the place or places of its manufacture, agency and sale,—and accompanied with such detailed description and explanation of its use and merits, as the owner shall deem necessary to their full understanding."

While attening the Fair at Hartford, in October, we made a hasty call at this Repository, and from all we saw, are induced to think very highly of its utility. A spacious apartment has been fitted up for the reception of articles, and a collection, quite large, considering the little time that has elapsed since the institution was established, has been made. It is under the charge of **Lorenzo Bull**, Esq., to whom applications for depositing articles, should be made. We commend the Repository to the favorable attention of the public.

Elegant Fabric.—A silk bed-quilt was presented at the Hartford Fair, by Miss **Smith**, which was composed of 7,780 pieces. The pieces were set in what is called the block form, and so perfectly was the work executed, that the article had the appearance, at a little distance, of a collection of blocks of various colors, beautifully arranged, each standing out in full perspective. It was entirely the work of the young lady who offered it, and had occupied her youthful hours for the space of *nine years*.

Agricultural Exhibition at Frederickton, N. B.—J. H. **Reid**, Esq., gives a brief account of the show of the Provincial Agricultural Society of New Brunswick, which took place on the 5th of October. Mr. R. says:—"The horses were not a good specimen of stock, as the premiums were confined to three-year old colts. The pigs were all of the Berkshire and Sussex breeds, and were most beautiful. The vegetables were fine—no country could beat our potatoes, carrots, mangel wurtzel, and turneps. The handiwork of our women was good, and showed industry. Butter cheese, cloth, &c., were all good."

Big Cabbage.—We have received from Mr. **Henry Tolhurst**, Troy, a cabbage weighing 22½ lbs. We are told that it is as remarkable for its fine quality as for its large size.

The Iowa Farmer's Advocate, edited by H. **Gates**, and published at Burlington, by James Tizzard & Co, monthly, at $1 a year. We are glad to see agricultural journals springing up in our new settlements. They cannot fail to exert a highly beneficial influence. The Prairie Farmer at Chicago, is one of the very best of our farmer's papers; and every number shows, by the number of its contributors, the hold it already has upon the affections of the west. We hope to see our Iowa friend, ere long, giving similar evidence of the determination of the farmers of that new state to support a paper of their own.

Fat Mutton.—We are informed that Mr. **Wynant Younghans**, of Sandlake, lately slaughtered a 3 year-old ewe, a cross of the Cotswold and Bakewell breeds, the carcass of which weighed 115 lbs., and was sold to Mr. **Willard**, proprietor of the Troy Female Seminary, for 8 cents per pound. The pelt weighed 21 lbs., and sold for $1.75; the rough tallow sold for $1.05, making the nett proceeds of the sheep $12. We have seen Mr. **Younghan's** sheep at the Troy shows—they are good.

Vermont Agricultural and Horticultural Society.—We are pleased to learn that a society with this title was organized at Montpelier, on the 28th of October last. Its officers are Charles Paine, of Northfield, *President;* Leonard Sargent, of Bennington Co., George T. Hodges, of Rutland, William Nash, of Addison, L. G. Bingham, of Chittenden, B. B. Newton, of Franklin, Samuel Adams, of Grand Isle, Ariel Hunton, of Lamoille, Wm. J. Hastings, of Orleans, Daniel Baldwin, of Washington, E. B. Chase of Caledonia, Reuben C. Benton, of Essex, A. B. W. Tenney, of Orange, John Porter, of Windsor, Frederick Holbrook, of Windham, *Vice-Presidents;* E. C. Tracy, of Windsor, *Rec. Secretacy;* C. Goodrich, of Burlington, *Cor. Secretary;* Geo. W. Scott, of Montpelier, *Treasurer;* E. P. Jewett, of Montpelier, *Auditor;* Harry Bradley, Burlington, Francis Wilson, Hinesburgh, Geo. W. Collamer, Barre, J. W. Howes, Montpelier, *Executive Committee;* C. Goodrich, Burlington, S. R. Hall, Shaftsbury, David Reed, Colchester, *Publishing Com.*

The people of Vermont are among the most enterprising in the country, and the organization of this society is but another evidence of their determination to improve the valuable resources of their state.

The Past Season in Ohio.—**Isaac Dillon**, Esq., Zanesville, Ohio, writes—"The wheat crop in Muskingum county, was not over half an average crop. The season has been very favorable for Indian corn and oats, and we have the largest and most uniformly good crops of those grains ever raised in Ohio. The potato disease is prevailing everywhere, so far as I have seen or heard. A neighbor of mine who expected to have two thousand bushels, will not gather one hundred. My own crop is so diseased that it is not worth digging."

Seedling Apple.—A. R. **McCord**, Esq., of Lagrange, Dutchess county, has left with us a specimen of a seedling apple which we think entitled to notice. It is of medium size, good form, (nearly round,) and of a beautifully striped red color. It ripens in November, and will keep till January. Its taste is pleasant, but not as high flavored as some.

Protection of hickory wood from Worms.—In our last, we stated that a correspondent of the *Prairie Farmer* had recommended the cutting of hickory the last of July or first of August. At the exhibition of the Hartford county Ag. Society, (Ct.) we saw what was deemed a demonstration of the correctness of this theory. Specimens of hickory wood, cut in August, were shown, which were perfectly sound, and had not been touched by worms; while samples which were cut the same year in the winter and spring months, were so badly eaten by worms as to be worthless for timber.

Multicole Rye.—Reuben Wheeler, of Ferrisburgh, states in the *Vergennes Vermonter*, that he obtained some multicole rye, which he sowed the first season about the middle of May in drills; he mowed it twice that summer, and the next year it yielded a good crop. In September, the second year, he sowed a larger piece of ground with it—pastured it with sheep till winter; the next season measured what grew on ten rods of the piece, and found it at the rate of *sixty-four bushels and one peck* per acre. The land had no manure. He says he has found this kind of rye better for bread than common rye—being white and less rank. He states that he has counted from 70 to 120 straws from one grain, all producing large heads.

A Female Farmer.—The second premium for the best cultivated farm in Litchfield co., Ct., was awarded the past season to Mrs. Vesta Hawkins, of Watertown. The farm contains 160 acres. It has been under Mrs. H.'s management for the last ten years. The committee of examination say:—"It is divided the present season into twenty-two acres of meadow, three and a half of corn, six of oats, one and a half of rye, two of buckwheat, a half acre of potatoes, seven acres of woodland, and the residue of pasture land. The produce of the farm for the present season is estimated as follows: fifty tons of hay, two hundred bushels of corn, one hundred and thirty-three shocks of oats, and one hundred and fifty bushels of potatoes. The stock kept on it this season consists of twenty-six head, including six calves raised this season, two horses and fifty-six sheep. This farm is conveniently laid out into small fields, the fences mostly of rails, all in good repair, and together with the buildings, presents a neat and tidy appearance."

Timothy after Barley.—A correspondent of the Genesee Farmer sowed timothy seed with spring wheat and with barley—both alike, with the same quality of seed. A fine growth of timothy, unmixed with other grass, followed the barley; while after the wheat it was mixed with small clover and red-top. The crop of grass on the former was good—on the latter, poor—the treatment being precisely alike. Hence it is inferred that barley is less exhausting for timothy, and better adapted to precede it in a good rotation.

Sale of Long-Wooled Sheep.—We understand that Mr. Clayton B. Reybold, sold at his farm, near Delaware City, Del., on the first of September last, a lot of his superior Long-Wooled rams, at the following prices:—No. 1, $61—Maj. Peter, Montgomery county, Md.; No. 2, $44—Mr. Carroll, Baltimore; No. 3, $40—Mr. Gray, Philadelphia; No. 4, $43, and No. 5, $100—Mr. Griscom, New-Jersey; No. 6, $10—Mr. Hickman, Pa.; No. 7, $43, and No. 8, $41—Mr. Bolling, Va.; No. 9, $45—Mr. Brown, Md.; No. 10, $41—Mr. Jessup, Baltimore; No. 11, $40—Mr. Peyton, Tenn.; and No. 12, $40, Mr. Hall, Sussex, Del. Eight ewes sold as follows:—No. 1, two ewes, $28 per head—Mr. Holt, N. C.; No. 2, two ewes, $14 per head—Maj. Peter, Md.; No. 3, two ewes, $13 per head—Maj. Peter, Md.; No. 4, two ewes, $11 per head—Mr. Jessup, Baltimore.

A specimen of Industry.—A correspondent of the Albany Atlas, says he became acquainted twelve years ago with a man who owned and occupied a fifty acre farm, kept in the best state of cultivation by his own labor. When asked how he managed to do so much, without ever appearing in a hurry, and never behind hand in his work, he said, "I always rise at 4 o'clock in the morning, summer and winter, and frequently get half through a day's work before my neighbors get fairly to work in the morning, and have plenty of time to read the Cultivator, and two or three newspapers." He now owns another and large farm, occupies both, and superintends the manufacture of over half a million bushels of salt yearly, in doing which he travels six miles every morning, and frequently gets to his office before his deputies; and has apparently as much leisure to read and converse as when he cultivated the small farm.

Chess and Wheat on the same head.—Much was said and published this season, of a head of wheat, found in Ohio, which had "seven perfect grains of chess growing out of it." M. B. Bateham, of the Ohio Cultivator, after some exertion, procured the identical head, when, on very close inspection, the chess spikelet was found to have *no connexion* with the wheat head, but was merely hooked in by its thread-like stem, between the chaff and the stem of the wheat head—probably caught there accidentally in harvesting. Some of the papers, in their eagerness for facts in favor of transmutation, have published the account of the wonderful head, on friend Bateham's authority, without any allusion to the *denouement!*

Subsoiling—Tall Corn.—M. B. Bateham, of Columbus, Ohio, exhibited this autumn at the Columbus Horticultural fair, stalks of corn 14 feet high, grown on his own little farm—the soil clay, formerly a brick-yard, moderately manured, and SUBSOIL PLOWED.

Slow Plowing.—In Teschaids' Travels in Peru, it is stated that such a thing as a "regular plow" is not known in Chiloe. The plowing, such as it is, is done by Indians, who thrust sharp poles into the ground, and then by pressing upon them, as on levers, break up the surface.

Western Commerce.—In the commerce of the Mississippi valley there are 1,200 steamboats; the annual expense of running them, 32 millions dollars; persons employed on them, 40,000. The annual commerce of the Mississippi valley is estimated at 430 millions of dollars. How important is the dissemination of agricultural knowledge, that the business, for which all this great machinery is but the servant, may be conducted to as much profit and advantage as possible.

Docking Lambs.—Never hold the lamb by the tail, as is often done, while the operation is performed. For the skin being drawn back, when it recovers its natural place, leaves the bony stump bare. But push the skin towards the rump, and returning it will cover the wound.

American Enterprize.—The first electric telegraph was, we believe, made in England; but only a few miles there are yet in operation; while nearly 2,000 miles are now in use in the United States.

An Inquiry.—Which is the most important to the substantial welfare of our country, War, or Agriculture? What are the annual appropriations by government to our military schools, to the army, and the navy? How many millions? What also are the annual appropriations by government to our agricultural schools and to agriculture? What proportion does the one bear to the other?

Valuation of Land in Maryland.—From the report of the committee of Ways and Means to the Maryland Legislature, giving the average valuation of the land per acre in most of the counties, it appears that the lowest is $4.88, and the highest $29.14—with various intermediate valuations.

Maple Sugar in Vermont.—Mr. R. Richardson, in his late address before the Washington County, (Vt.) Ag. Society, states that in 1840, the quantity of maple sugar made in Vermont, was 4,647,934 pounds,—equal to about 16 pounds to each man, woman, and child.

The Architect, a series of Original Designs for Domestic and Ornamental Cottages, connected with Landscape Gardening, adapted to the United States. Illustrated by Drawings of Ground Plots, Plans, Perspective views, Elevations, Sections, and Details. By **William Ranlett**, Architect: Published by **W. H. Graham**, New-York.

This highly respectable work is issued in numbers, each number containing two or more plans of buildings, with perspective views, ground plans, interior details, and complete specifications and estimates. The work, as we are informed, has been projected to supply a systematic treatise on Rural Architecture, with scientific and practical developments of various styles adapted to the United States. It is to be comprised in two volumes, the first of which, consisting of ten numbers, is completed, and contains twenty-one original designs of rural residences, cottages and villas, exemplifying twelve different styles of architecture—the erections varying in cost from nine hundred to twelve thousand dollars. The work also contains sketches of different styles, essays on ventillation, the appropriation of light, heat, water, and other subjects connected with building. It is intended that the whole work shall constitute a "scientific and practical guide for the erection of country and suburban dwellings of all grades, from plain cottages to elaborate and ornamented villas in the most approved styles of rural architecture; also for laying out and improving the grounds connected with them." We deem the work especially deserving the patronage of all who are interested in the subjects to which it is devoted.

Emigration.—Rev. Mr. **Goodwin**, in his address before the Middlesex County (Ct.) Ag. Society, discusses the subject of emigration. He thinks "there is no necessity, as many would suppose, of emigrating to the fertile regions of the West. We love to hear," he continues, "of the fruitful soil of that region, and from our inmost hearts we thank God that such a goodly land is given us; but with all that may be said in favor of those rich and fertile prairies, we love more than these, the hills and vallies of our own New England. True, the latter require more labor at your hands. Year by year they must be enriched by you, and that perhaps in no small measure; but when this is done they will certainly repay you. With less abundant crops, perhaps, than those in distant sections of our land, you are sure to realize a much more liberal price. You have here, moreover, the society that you love,—you have those around you whom you have known from childhood up, and whose characters you respect and value. You have, too, schools and churches established at your hands. Besides, we believe it is a mistaken idea, that so much is gained, in any respect, by those who, relinquishing their birth-places and their friends, secure in the thinly settled regions of the West, the possession of lands on terms which seem so low. There are various improvements to be made on those lands. These improvements demand no little additional sacrifice of time, labor, and capital. We believe, if this were all considered, it would be found that in this state, and various portions of New England, there could be farms obtained, with every improvement in the way of walls and buildings, as reasonable as, in the end, will prove the lands I have referred to."

Mental improvement of Farmers.—Professor **Meacham**, in his address before the Addison County (Vt.) Ag. Society, observes:—"In making provision for your family, you should provide something to *read*, as well as something to *eat*. You have little reason for congratulation in improving land and stock, if the mind about you is going to waste. Every farmer has more time in the year for gaining general knowledge than any professional man in the active pursuit of his profession. But it does not depend on time so much as on inclination. Webster says that 'even in matters of taste and literature, the advantages of a man of leisure are apt to be over rated. If there exists adequate means of education, and the love of learning be excited, that love will find the way to the object of desire through the crowd and pressure of the most busy society.'"

Apple trees bearing in even and odd years.—We mentioned in a late number of our paper, that Mr. **Cole**, of the *Boston Cultivator*, entertained the belief that apple trees produced more fruit in *even* than in *odd* years. As he has expressed a wish to have his views placed "in a proper light" before our readers, we make the following extract from his paper of the 13th of November:—

"In New England, generally, when the seasons are favorable, we have a large crop of apples in even years, and a small one in odd years. These remarks apply both to natural and grafted fruits, and to most parts of New England. We have noticed for thirty years, so far as our observation has extended, and so far as we have heard by reports, that orchards of natural fruits bear mostly in even years, and nearly all of our valuable kinds, such as Baldwin, Hubbardston Nonsuch, Rhode Island Greening, Danvers Winter Sweet, Porter, Jewett's Fine Red, and some others, bear mostly in even years. There may be exceptions in single trees, and even whole orchards and neighborhoods, still the general principle, as we have stated, is correct. As to other parts of the country, besides New England, we have made no remark, but we think that in the middle and western parts of New-York, there is generally as large a crop of apples, if not larger, in odd years; for when we have a scarcity here in odd years, there is a large supply from that state."

Yield of Potatoes for 1847.—The committee of the Berkshire County (Mass.) Ag. Society, appointed to examine crops for the year 1847, state in reference to potatoes, that they believe one-fourth of the crop in the county was lost by the rot at the time of the examination—first of October—and that the disease was then progressing. The committee, however, awarded the following premiums: For the best acre of potatoes, the long-red, or Merino variety, estimated at 480 bushels, raised on swamp muck, lightly manured. For the second best acre, 380 bushels, Mercers. Third best acre, 380 bushels, June Pink-eyes.

Good Mode of Trenching.—A "Suburban Grower" of strawberries, Boston, describes in the Horticulturist, the following excellent mode of deepening and enriching garden soil, which may be applied to other crops than strawberries:—Take off the soil one spade deep along the whole side of the piece to be trenched. Carry it in a wheelbarrow and empty it on the opposite side of the plat, where the trenching is to end. Then cover the earth in the bottom of this trench with a heavy coat of manure, and dig it under at once. Then dig another such trench by throwing the top soil on the soil just manured and dug. Pursue this course till the whole is finished.

This doubles the depth of the soil, and enriches it, and does not deteriorate the quality of the surface by the admixture of the subsoil, as in common trenching.

Fine old Pear Trees.—According to S. G. **Perkins**, in the *Horticulturist*, many trees planted by the French Huguenots, in the early part of the last century, are still standing. "There are a few solitary trees of the old fruits of a hundred years standing, and more left in yards, which continue to produce the finest St. Michaels [Doyennés,] St. Germains, Brown Beurrés, Virgalouse, Winter Colmars, &c., as fine as they did fifty or sixty years ago."

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Nov. 15, 1847.

FLOUR—Genesee, per bbl. $6.18¾—Ohio and Michigan, $6

GRAIN.—Wheat, Genesee, per bu., $1.45—inferior southern, $1.06—Corn, northern, 72a73c.—Rye, 91c.—Oats, 53c.—Barley, 85a87c.

BUTTER—Orange County, per lb., 21a24c.—Western, dairy, 16a18 cents.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $9a$9.50.—Prime $6a$6.50.

PORK—Mess, per bbl., $15—Prime, $9.87a$10.25.

HAMS—Smoked, per lb., 11a12cts.

LARD—Per lb. 10a12c.

HEMP—Russia clean, per ton, $220. Am., dew-rotted, $150.

HOPS—First sort, per lb., 7a8c.

COTTON—New Orleans and Alabama, per lb., 7a9½c.—Upland and Florida, 6¾a9c.

WOOL—(Boston prices,) Dec. 13.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,....................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a35	"
" one-fourth blood and common,.....	28a30	"

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THE NEW-YORK TRIBUNE.

WE are on the eve of another Presidential Election. Let none fancy that since it is approached so calmly, it will be conducted sluggishly and terminated without excitement. Whoever cherishes such an illusion mistakes the character of the American People and the impulses which sway them. Equally idle is the imagination that party lines are to be effaced and broken down in this contest—that the prestige of some heroic achievement or the glitter of an epaulette is to chase from the popular mind all memory of the radical differences of sentiment which have so often arrayed one-half of our countrymen in fierce conflict with the other. Idle chimeras these! offspring of an empty heart or a sickly brain! With the progress of events a particular measure may become more or less important. the emphatic assertion of a certain principle more or less essential, but the question of questions remains and will remain. At one time, the establishment or maintenance of a Sound and Uniform Currency; at another, the upbuilding or cherishing new or feeble branches of Home Industry; at another the proper disposition of the Proceeds of the Public Lands; at a fourth, Peace or War, Spoliation or Justice; but underneath all these, mightier than any, more enduring than all, lives ever the elemental difference in which parties have their origin—on one side, the idea that Government should be Creative, Constructive, Beneficent; on the other, the negative, skeptical, do-nothing element, whose axioms are, "The best government is that which governs least," "The People are inclined to expect too much from Government," &c.,—which sees in a Canal, a Railroad, a Harbor, a Protective Duty only a means of enriching a few individuals at the expense of the community, and which cannot conceive how any can be benefitted by a public work without inflicting injury in at least equal measure upon others. The fundamental axioms of this negative philosophy are really hostile to Common Roads and Common Schools, required and sustained by law, as well as to those elements of national well-being against which it now directs the energies of a great party. The antagonism of sentiment growing out of these conflicting views of the nature of the true ends of Government cannot, in the nature of things, be lastingly compromised; it cannot be terminated by the result of any one election. It must be potentially felt in the party contests and popular agitations of many years to come.

On this and all the great questions growing out of it, THE TRIBUNE maintains emphatically the doctrines of the Whig Party. It advocates *Protection to Home Industry*, wherever such protection may be needed, and to the extent of the necessity; a *National Currency*, sound and of uniform value, composed of coin and paper in such proportions as public interest and general convenience shall dictate; *Internal Improvement*, by the General and State Governments, each in its own sphere, and by Associations, liberally incited thereto by such facilities as legislation may safely and justly afford; and such disposition of the *Public Land Proceeds* as shall secure the benefit thereof to the people of all the states throughout all future time. Above all, this paper will "study the things that make for peace," and strenuously oppose the fell spirit of war, the lust of conquest, and the passion for Military Glory, so mortally adverse to all those ideas of Social and Political Economy to which it is devoted, as a mildew to genuine Democracy, as utterly at variance with Christianity, and as a scandal to the Nineteenth Century. These views will be faithfully and fearlessly commended to public favor, while our opposition to the Extension of Human Slavery over one foot of soil where it has not now a legal existence shall be unsparing, uncompromising, and subject to no consideration of party advantage or Presidential triumph. Far sooner will we sink with our principles than succeed without them, however desirable success or however mortifying defeat.

THE TRIBUNE will endeavor to commend itself to all classes of readers by the fullness of its intelligence as well as the fairness of its discussions. With this intent one assistant editor will remain at Washington during the Session of Congress, giving daily reports of sayings and doings in the Houses and elsewhere; two European Correspondents will transmit us regular dispatches from the Old World; while no expense will be grudged in procuring the earliest and most reliable information from all parts of the world. Reviews of New Books of decided interest, and selections from the Popular Literature of America and Europe will be frequently given, with occasional reports of Public Lectures of high character; but it shall be our first object to present a fair and full picture of the *real* world, only varied at intervals by excursions into the realm of the ideal.

THE NEW-YORK TRIBUNE is issued Daily (a Morning and two Evening Editions, in order to serve each subscriber with the latest news possible) on a fair imperial sheet at Five Dollars per annum, or half the price of the great Commercial journals, by which it aims to be surpassed in nothing but Advertisements. A SEMI-WEEKLY EDITION is issued on a similar sheet each Wednesday and Saturday, and offered to subscribers at Three Dollars per annum or $5 for two copies. THE WEEKLY TRIBUNE is printed on a sheet of nearly double the size of the Daily, and afforded at Two Dollers per annum, Six copies for $10, Ten copies for $15, or Twenty for $24—payment being invariably required in advance. When the term paid for expires, the paper is uniformly stopped, so that no man need hesitate to take it from an apprehension that he will be persecuted by duns, or unable to get rid of the paper when tired of it. This rule has given offence to a few patrons of the non-paying order, but the great majority seem to like it better than the old fashion. It is not our custom to appoint Local Agents to solicit subscriptions, nor to place great reliance on Agents at all. But any person who is well enough known to be trusted by his neighbors may aid us if he will, and help himself if he chooses, by taking this Prospectus, and asking those who like The Tribune to hand him the money for a year, which he can remit at Club price, and thus obtain pay for his time and trouble. Subscriptions accompanied by payments are respectfully solicited by GREELEY & McELRATH,
154 Nassau-st., New-York.

☞ Notes of all specie-paying Banks in the United States are taken for subscriptions to this paper at par. Money inclosed in a letter to our address, and deposited in any Post Office in the United States, may be considered at our risk; but a description of the bills ought in all cases to be left with the Postmaster. G. & M.

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No paper continued after the expiration of the time subscribed and paid for. Dec. 1, 1847—1t.

SOUTH DOWN BUCKS.

THE subscriber offers for sale a few very superior South Down Bucks, some of which were selected by him in England. They are thought to be the best sheep of this breed in America, uniting as they do the blood of the celebrated flocks of the Duke of Richmond and Earls Jersey and Bathurst.

Application may be made by letter, addressed to Rhinebeck, N. York, or personally at the Ellerslie Farm, on the Hudson river, two miles south of Rhinebeck Landing. WILLIAM KELLY.

Ellerslie, Dec. 1, 1847.—1t.

TO WOOL-GROWERS AND BREEDERS OF FINE SHEEP.

REV. L. G. BINGHAM, of Williston, Vt., during the past summer has purchased and received from J. A. Taintor, Esq., of Hartford, Ct., eight of his imported Merino ewes, one buck lamb, and his very superior stock buck—the sire of the very superior buck lambs which have been sold out of his flock the past season. This buck was brought from France when a lamb—is one year old last January—was sheared 10th of August last year, soon after arriving—and was sheared same day of the month this year, having worn his fleece just one year—was clean-washed three days before shearing. His fleece weighed 14 lbs. His stock proves to be of rare excellence, and his lambs by the imported ewes have been sold at $100 to $200 each. Having often been applied to to put him to American Merino ewes, I have concluded to do so to a limited extent. The price will be $5 a head, to be paid on taking away the ewes. Applications must be made early. I have rented all the stock and land of Rev. L. G. Bingham, and all communications must be addressed to me at this place, Williston, Vt. The buck lamb herein mentioned, is for sale. He is from one of the best imported ewes, and will make a splendid sheep. The next crop of buck lambs will also be for sale. First come first served. When it is considered that all the buck lambs from this buck have been sold for $100 and upwards, the price charged for the use of him must be regarded as very reasonable. BENJ. F. BINGHAM.

Williston, Vt., Dec. 1, 1847.

HAY AND STRAW CUTTERS.

A LARGE supply of Stevens', Hovey's, and Towers' Cylinder Hay and Straw Cutters, constantly on hand at manufacturers' prices, at the Albany Agricultural Warehouse. When farmers learn the benefits to be derived from using cut feed, they will not be without a good machine. Mr. A. Burlingame, of South Trenton, N. Y., used one the past season, and the value he places upon its use is found in the following extract from a communication from him:—

"With less hay to begin the winter, and 30 cows and 4 horses (in all 100 head) more than the year before, he saved over from five to seven tons of good hay, while the year before he was entirely out before grass came." The greatest saving is in using up all parts and kinds of feed, instead of running to waste. For sale at the Albany Ag. Warehouse, Nos. 10 and 12 Green-st..

L. TUCKER.

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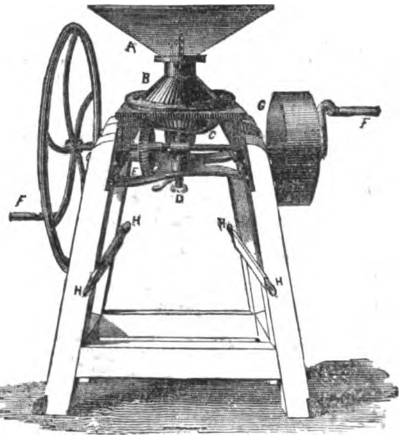
☞ The above work is for sale at the office of the Cultivator.



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SITUATED at West Galway, Saratoga Co., consisting of 122 acres, of which 82 acres are in a high state of cultivation, well fenced and well watered; the balance is heavily timbered woodland. On the premises are a good assortment of fruit trees, a dwelling house, and all necessary and convenient out buildings, in good order. The house is situated in a large grove of forest trees,—is 15 miles from Schenectady, and 8 from Amsterdam village. Inquire on the premises, of **H. BOGGS.**

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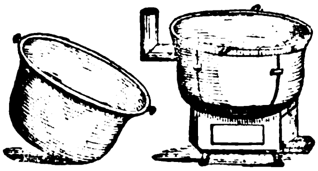

THE cut represents the most approved portable furnace for agricultural purposes now before the public. It is formed of cast iron, and is of itself both stove and boiler. The boiler is shown in the cut as detached from the stove; its form is such that the fire passes completely round the kettle or boiler, the space being some two or three inches between the outside or stove and the boiler. This causes the water to boil very quickly, and with very little fuel; saves all the expense of masonry and brickwork, as a funnel or stove pipe is all that is necessary to give it a draft for all purposes. They are admirably adapted to boiling or steaming vegetables and food for stock, and are convenient for many other purposes where large quantities of water are required to be heated. The following are the manufacturer's retail prices; they can be furnished both wholesale and retail.

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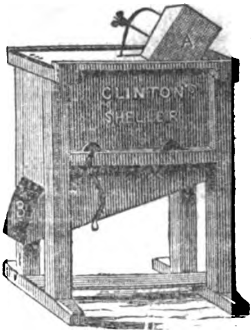

THE accompanying cut is a good view of the single hopper and single balance-wheel machine. This is believed to be one of the most efficient and durable shellers ever used as a hand sheller, having been in use for the last ten years or more, and having had some slight improvement it still stands at the head of the list of shellers for ease of operation, amount of work and durability. With two men, two hundred bushels of ears are easily shelled per day, or with two hoppers and large balance wheels, double that amount can be done with three men. It is equally well adapted for the large ears at the south and west as for the small ears at the north. Some have a balance wheel on each side; this balances the machine a little better, and the wear of the shafts is more equal and durable. It is about one and a half by two and a half feet on the floor, and three and a half feet high; with the single hopper it weighs about 100 pounds; with double hopper and balance wheel, it weighs about 150 pounds. Price, with a single hopper, $10; with a double hopper, $13. Warranted satisfactory. For sale at the Albany Ag. Warehouse. **L. TUCKER.**

Dec. 1, 1847.

RURAL PUBLICATIONS.

THE CULTIVATOR, a monthly journal of Agriculture, Horticulture, and Domestic Economy, published at Albany, N. Y., by Luther Tucker. Single copies $1 a year. To Clubs or Agents, seven copies for $5—Fifteen copies for $10, and at the rate of three copies for $2. for all over 15 copies. This work has now been published fourteen years, with a constantly increasing popularity among the farmers of every part of the United States. The volume for 1848, will commence on the 1st of January, at which time all subscriptions for the year should commence.

THE HORTICULTURIST, *and Journal of Rural Art and Rural Taste*, a monthly magazine, edited by A. J. DOWNING, Esq., of Newburgh, well known as the author of "Landscape Gardening," "Cottage Residences," "Fruits and Fruit Trees of America," &c., and published at Albany, by Luther Tucker.—price, $3 a year—20 per cent discount to Agents. The first vol. of this work was completed with the June number for 1847, and with the back numbers of the 2d vol., now in course of publication, can be furnished to all new subscribers. The Horticulturist embraces in its scope, the Description and Cultivation of Fruits and Fruit Trees, Ornamental Trees, Shrubs and Plants—Designs for Rural Cottages, Farm Houses, Lodges, Ice Houses, Vineries, &c.,—Landscape and Ornamental Gardening, and all matters of interest to the horticulturist, and should be in the hands of all who desire to enrich and beautify their residences by the comforts and adornments of rural art and rural taste.

Postmasters and others having a taste for rural pursuits, and disposed to aid in circulating correct information upon rural subjects, are invited to act as Agents for the above publications. All letters to be addressed to LUTHER TUCKER, Publisher, Albany, N. Y.

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